

# THE END OF SUMMER

In an abandoned city, before a tropical storm, we take a look at the animated short, 'Fin d'ete'.

## KING KONG

The past, present and future of the technology that made one of last years biggest blockbusters possible...

## ADEL ADILI

Managing Director of Taharan, and about to start Leda Animation Studios, Adel finds the time to talk to us

## ERICK MILLER

>>on his career and new book

## SWORDMASTER

Follow our new 'step by step' tutorial to create 'SwordMaster' from head to armour, 8 months in a row! This month Part 2 Modeling the Torso

## MAKING OF'S

1954 Mercedes-Benz 300SL Gullwing by Hrvoje Rafael & Roof Garden by Lukasz Szefflinski

## ARTICLE

Texturing Masterclass - Low poly character texturing part 1 Richard Tilbury, Alpine A443 - Part 2 of 3 by d'Ettore Olivier-Thomas & Rigging for Moosah & Chub by Adam Scott

## GALLERIES

10 of the best images from around the world featuring Soa Lee, André Holzmeister Greg Petchkovsky, chokata, Laurent Ménabé, Sebastien SONET, Ali Ismail, Julian, Johnson-Mortimer & Johnny Pham.







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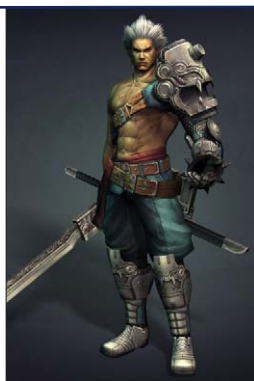
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MAKING OF  
Hrvoje Rafael  
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GALLERIES  
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Managing Director of Taharan,

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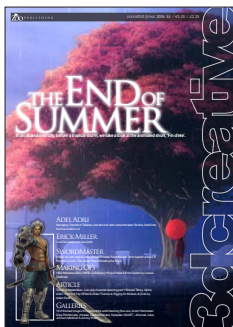
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## WELCOME

Once again to 3DCreative magazine. We have broken all records this month with the biggest issue ever!

As well as the usual interviews, we have the amazing King Kong article.

## TECHNIQUES AND TUTORIALS

As usual, the Swordmaster tutorial is this month's 'biggie' with part 2 - modeling the torso. We are into part one of the Texturing a Low poly character tutorial, part of the 'Texturing Masterclass' series by our resident artist Richard Tilbury. D'Ettorre Olivier-Thomas flies into part 2 of his car modeling tutorial and we take a look at some top-class rigging from Adam Scott.

## INSPIRATION

Fin d'ete hold the cover this month and rightly so! Go to page 13 to read all about this spectacular short movie.

## INDUSTRY

Pierfilippo Siena has written a huge article on the past, present and future of the technology that went into making on of last years biggest blockbusters - King Kong. See what to expect from the new Disney Pixar movie 'Cars' on page 22, and take a brief look at Stardust's work on the latest Nike basketball commercial.

Stick with us and we promise its just gets better every month! Also, look out for the new 3dcreativemag.com website as of next month.

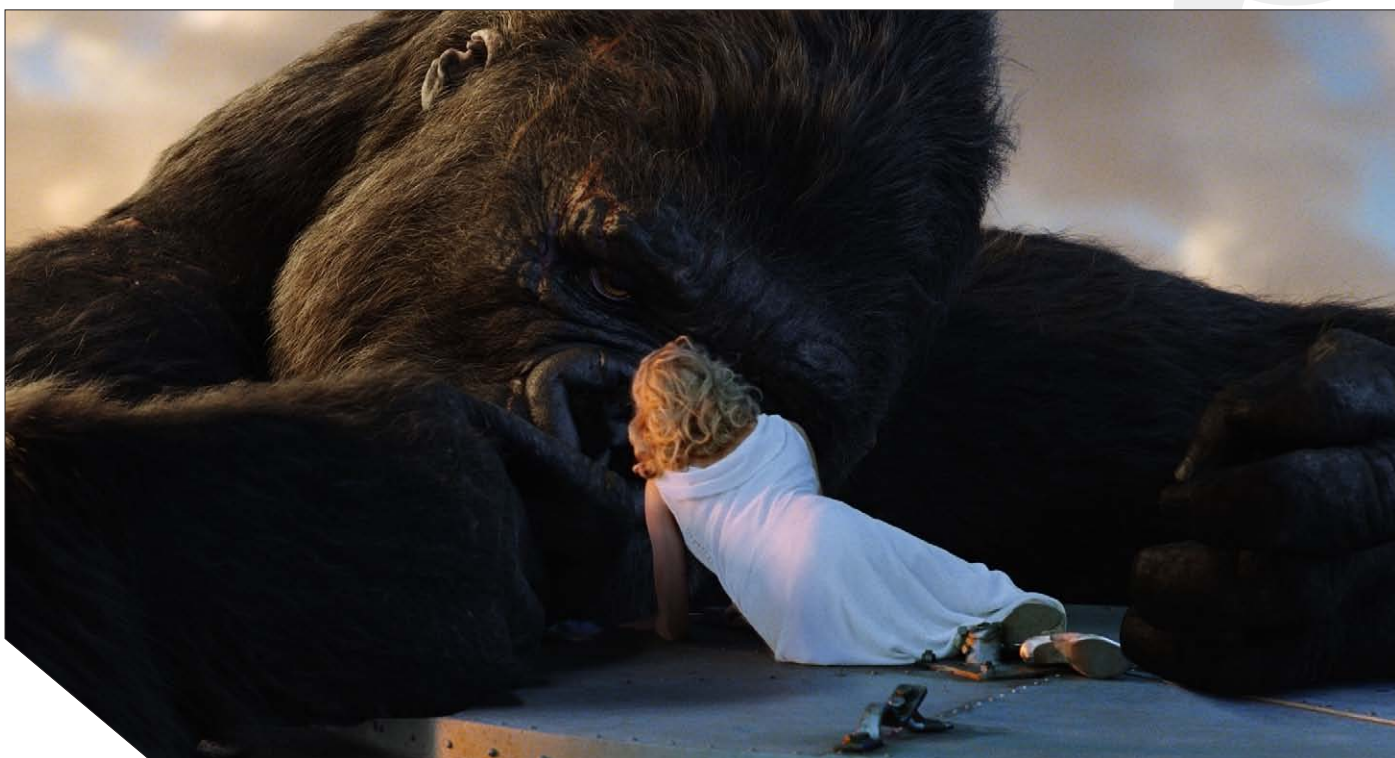
## ABOUT US

Zoo Publishing is a new company comprising of a small team here in the Midlands, UK.

This magazine is our first project which we are hoping, with the support of the community,

will build into a great resource and a highly anticipated monthly release. The 'support of the community' is an interesting point, where a 'magazine for 3d artists' is not an original idea, the marketing and distribution of this magazine, as far as we know, is a first. It follows the principle of traditional magazines that are sold on news stands and in many outlets, but being a digital downloadable mag the many established web communities on the net are our outlets and newsstands. 3DCreative is supported by 3dexcellence, 3dkingdom, 3dlinks, 3dm, 3dmonkeys, 3dnuts, 3dpalace, 3dresources, 3dtotal, 3dvalley, 123d, ambiguous arts, cgchannel, cgdirectory, cgfocus, cgunderground, childplaystudios, daz3d, deathfall, digitaltutors, kurv studio, max-realms, mediaworks, rendezvous3D, spinquad, subdivision, the3dstudio, thebest3d, vocanson & vanishingpoint.

We look forward to lasting and successful partnerships with these CG community sites.







### Luciano Iurino

I started back in 1994  
with 3DStudio on  
MS-Dos as modeler/  
texture artist. In  
2001 I co-founded  
PM Studios & I still

work for it as Lead 3D Artist. Recently we have  
developed the videogame "ETROM - The Astral  
Essence". I also work as freelancer for different  
magazines, web-portals, gfx & videogame  
companies. Recently I left the 3dsmax  
environment to move on XSI.

[iuri@pmstudios.it](mailto:iuri@pmstudios.it)



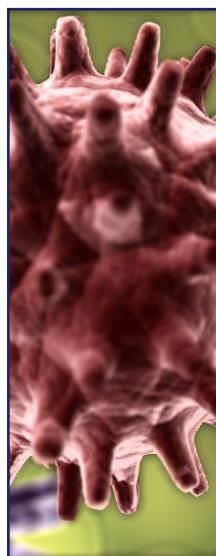
### Vojislav Milanovic

3D modeler, animator,  
& vfx compositor,  
Anigraph studio, Self  
taught all-round 3D  
guy, started to doodle  
around in 3D about

8 years ago. In the last 5 years I have done  
a lot of various things from print & TV ads to  
gaming & movie graphics. Currently involved in  
multimedia study & character developing for an  
animated feature movie. One of my goals is to  
make my own animated movie

[vojo@teol.net](mailto:vojo@teol.net)

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### Taylor Kingston

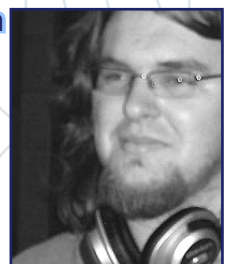
3D artist > Digital  
Illusions (DICE)

Started out with 3D  
on Studio Max Self  
taught through high  
school, going to

Sheridan College for tradition art, & Seneca  
College for Computer Animation where I  
switched over to Maya. Hoping to one day  
break into film, perhaps even getting into the  
directing side one day.

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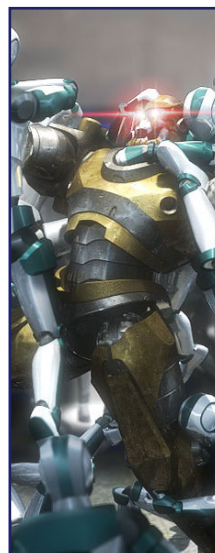
### Niki Bartucci

Freelance 3d modeler,  
Italy. I started  
working in the field of  
Computer Graphics in  
2000 as an illustrator  
& web designer. In

2003 I started using 3d software such as C4D  
& later 3dSMax. That year I worked on ETROM  
- The Astral Essence, RPG video-game for  
PC, developed by PMstudios. Currently I'm  
a freelancer & specialise in commercials. I  
especially like RPG & RTS video-games.

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### Giuseppe Guglielmucci

Freelance 3d  
modeler / Animator.

I began to use  
computers with the  
epoch of the vic20 &  
Cinema4d was my

1st 3d software. I started working in the field  
of CG in 1999 in commercial design. In 2003 I  
worked on ETROM - The Astral Essence, RPG  
video-game for PC, developed by PMstudios.  
Currently I'm hoping to work in the video-games  
industry & develop my own game.

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## Hrvoje Rafael

3d modeler > Zagreb,  
Croatia > Student  
of aeronautics.  
Started out with CAD  
software, primarily  
with Solidworks on PC

486 DX4. Still occasionally use Solidworks but  
trying to learn Catia also. Currently I am using  
3D Studio Max 5 which is just a hobby for now.

I am self taught at it and still in a process of  
learning. It would be nice if I could, one day,  
combine my 3D and engineering skills.

136dof@gmail.com



## Adel Adili

I started 3D using  
Autodesk 3dstudio  
in about 1993. At  
the moment I am a  
freelancer and I am  
more into 3D arts

(mostly interested in modeling,FX effects,lightin  
g,environment,texturing) but I am really just as  
intertested in 2D whenever I can afford the time  
I work on it. Sometimes I feel like working as a  
concept artist too.

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Would you like to contribute to 3DCreative Magazine? We are always looking out for new  
interesting artwork, artists, tutorials and more.  
Contact [warin@zoopublishing.com](mailto:warin@zoopublishing.com) for details.



an interview with

# Adili

"Being a child I always wanted to create something; I thought maybe a robot, but when I became disappointed with the idea, I used my imagination to fulfill my dreams. Then I thought maybe art would be the answer."







interview

# adel adili *Leda*

Hi Adel, how are you. Could you tell our readers about yourself, and what first lead you down the 3d path?

Hi there! And thank you for doing this interview, because it's a good opportunity to share my ideas with other artists especially with your readers. My name is Adel

Adili (nick name:Leda)

and I was born in Iran. Being a child I always wanted to create something; I thought maybe a robot, but when I became disappointed with the idea, I used my imagination to fulfil my

dreams. Then I thought maybe art would be the answer. So as a teenager I attended an art school and I tried to strengthen my knowledge of anatomy, perspective and art history, because I thought they were all necessary in the creation of artwork. So I continued my studies until I got my BA in Art.

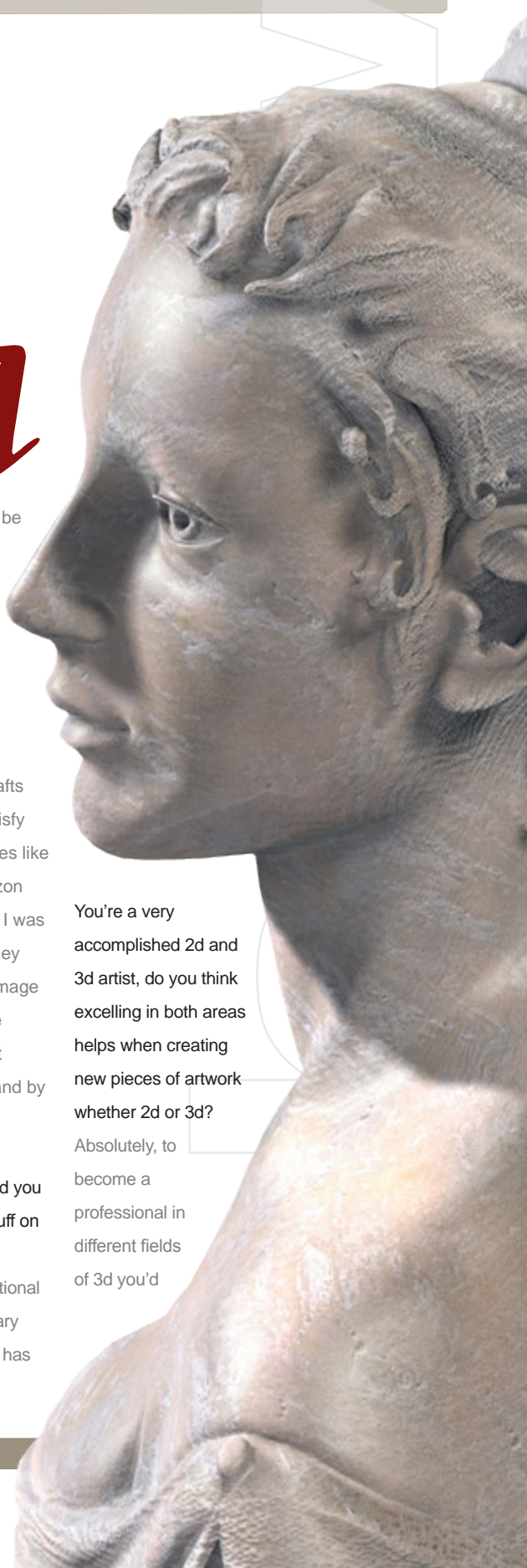
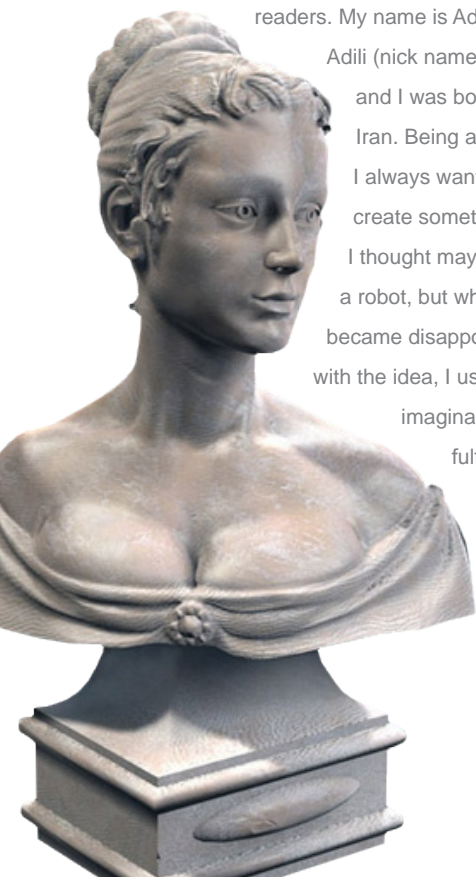
I was into painting, graphics and handicrafts but then I realized that they could not satisfy my desires and after watching such movies like Abyss, I was astounded by this new horizon ahead of me and I found that this is what I was looking for. Afterwards, I found out that they had used the 3d software program, Softimage to create those artwork. Unfortunately we couldn't access the software until the first version of 3dsmax in Dos was released and by working with that I entered the 3d world.

So with starting off in traditional art, how did you find the transition from this to producing stuff on the computer in 3d?

I wouldn't call it a transition but I think traditional art is the preliminary step which is necessary for creating digital art images. For me, this has been the continuation of traditional art.

You're a very accomplished 2d and 3d artist, do you think excelling in both areas helps when creating new pieces of artwork whether 2d or 3d?

Absolutely, to become a professional in different fields of 3d you'd





better be an expert in 2d first. Interesting is that, after awhile working on 3d you'll see the positive effect it has on your 2D too.

"I WAS INTO PAINTING, GRAPHICS AND HANDICRAFTS BUT THEN I REALIZED THAT THEY COULD NOT SATISFY MY DESIRES..."

With using both 3dsmax and Maya, would you like to learn any other programs, like for instance Zbrush as this seems to be widely used nowadays?

I always like to try new software, provided that it can satisfy my needs. What I learnt from Zbrush is that it lets you freehand model which is good, but I personally think modelling isn't like making something out of the clay and I would expect



something more out of a 3d modelling tool. They should provide me with the opportunity to make use of the best of the model topography which I call 'Power of the edges'. As a model should be animated, work easily in Dynamic simulation and light bouncing calculation fast and easily. Thus; creating the edges on the model manually results in what is intended. This needs a lot of discussion which needs more time and I don't think it's appropriate now.

Do you think there are any advantages in knowing more than one program?

If the programs are alike and give you the same result I don't think it is necessary to learn different programs. But, if you can afford the time, why not learning more!



So out of the two programs, Maya and Max, which one do you feel more relaxed/comfortable using and why?

Definitely I prefer Max. But for example, because of some obligations like clients needs, if I have to do something in Maya, I'll do it. I wouldn't say Max has any priority over Maya but I am more comfortable with it. I think these are just tools and the artist can use both when necessary.

"WHAT I LEARNT FROM ZBRUSH IS THAT IT LETS YOU FREEHAND MODEL WHICH IS GOOD, BUT I PERSONALLY THINK MODELLING IS NOT LIKE MAKING SOMETHING OUT OF THE CLAY..."

Which part of the whole process of creating your images do you enjoy the most?

Every part, like lighting, modelling, FX, rigging are all joyful, but the whole energy and joy should be in the concept. If you feel like your concept is what you really want, you'll enjoy it and it would affect the outcome in a good way.



So do you spend a lot of time in the concept stages of your creations?

The idea of a concept may pop out of your mind in a second but sometimes it takes days to reach what you want and in this case it becomes kinda disappointing. But if you get the result soon it will be motivating and you'll really enjoy starting the work.

How do you relax on your days off from being the Managing Director for your company, Tarahan?

Nowadays I am trying to focus on my freelancing more and I don't want to involve myself in managing the company, because it mostly deals with graphics. Also I am in the process of starting an animation studio (Leda Studio). To tell you the truth everyday is both a holiday and a working day for me, cause I enjoy my work. I am either working on my contracts or whenever I am done with them, I go to my own projects. I also enjoy being with my family more nowadays.



It sounds like you have a good working environment, how big is your company?

With the new technology and easy correspondence, today's companies can be as big as the whole world. Now I'm working with a few artists around me and also I'm in touch with some artists from other countries.

“GOOD FORUMS ARE A SUITABLE PLACE FOR SHARING OUR IDEAS AND IF SOMEBODY IS IN TROUBLE...”



So do you have anything planned like a short movie for example, when you finally get Leda Studio off the ground?

Yes, a good demo reel can be a portfolio for the studio. I have plans on working on the Rostam (a hero in ancient Persia), or a story based on Star Olympics .

How do you feel about the importance of forums are to any aspiring artist out there?

Good forums are a suitable place for sharing our ideas and if somebody is in trouble, they can get hints from other artists' comments.





Well it has been a pleasure talking with you, and I wish you all the best. One last thing before we finish. Could you tell us one thing that we would learn from you, if we were to hang around with you for a whole day?

Thank you for doing the interview. If I want to say something as a freelancer, I would say: be patient and keep your clients satisfied. But some advice for those who want to be a good artist is to have a strong imagination. When working, try to provide the same condition as the theme of the project for yourself to feel the mood of it because you have to work with all your heart; a good work needs all your feelings and emotions.

ADEL ADILI

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Interviewed By :  
CHRIS PERRINS





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INTRODUCING

**APEXX<sup>8</sup>**

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The background of the poster is a surreal, rainy scene. A large, vibrant red tree stands on the right side, its branches spreading out. In the background, a city is visible, but it appears abandoned and somewhat desolate. A woman in a red dress is standing near the base of the tree, holding a red umbrella. The sky is dark and cloudy, with rain falling heavily. The overall mood is melancholic and contemplative.

...with the same setting and the same mood, we were going to make a film about a lone fisherman attacked by a sea monster. Little by little, the sea monster became a storm and the fisherman a lone woman, mostly because it allowed us to have a less story driven and action-oriented film. I think the three of us are also quite fond of Asian cinema and animation, especially of those contemplative sequences, where the time seems frozen and you just feel like walking into the scenery.

# fin d'été

in an abandoned city before a tropical storm, a woman decides to stay.





industry

# Fin d'été

in an abandoned city before a tropical storm, a woman decides to stay.

Can you introduce the team, tell us how you came together and why you decided to work together to make your short film?

Joaquim: I come from Reunion Island, and I met Patrick and Ronan at a French CG Animation school called Supinfocom. I really wanted to work with these two guys because our tastes and ideas were really alike, and because of their will to do nice and finished work.

Ronan: Hi, I come from Brittany, France. Before my studies at Supinfocom, I studied Law while drawing a lot. The latter has proven to be quite useful afterwards...

Patrick: I come from Luxembourg, which I left after having finished my A-levels in Arts to join Supinfocom in Valenciennes.

Where did the original idea for the story come from?

Ronan: We wanted to create a contemplative movie, based upon moods and colours that we had in mind. Somehow, we also felt like going against the cliché of most of the 3D short films with a lot of action and Hollywood effects. We wanted to do something different, a movie that could eventually touch the spectator.



Patrick Harboun



Ronan Le Fur



Joaquim Montserrat





Joaquim: The main idea came from a lot of different experiences we each had. And even though the main vision stayed the same, the story actually changed quite a lot during the production.

Patrick: Yeah. Funnily, with the same setting and the same mood, we were going to make a film about a lone fisherman attacked by a sea monster. Little by little, the sea monster became a storm and the fisherman a lone woman, mostly because it allowed us to have a less story driven and action-oriented film. I think the three of us are also quite fond of Asian cinema and animation, especially of those contemplative



sequences, where the time seems frozen and you just feel like walking into the scenery.

sketches of the fuzzy different ideas we had. We had many concepts in our mind: the storm and its evolution, a tropical city, a lone girl... Then we built a story with all these elements.

How did you plan out the animation in the beginning, did you start with concept sketches and then build them up into a storyboard?

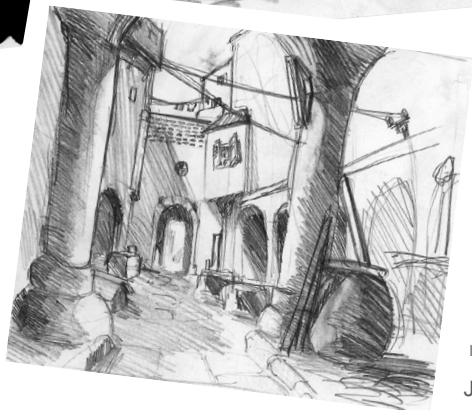
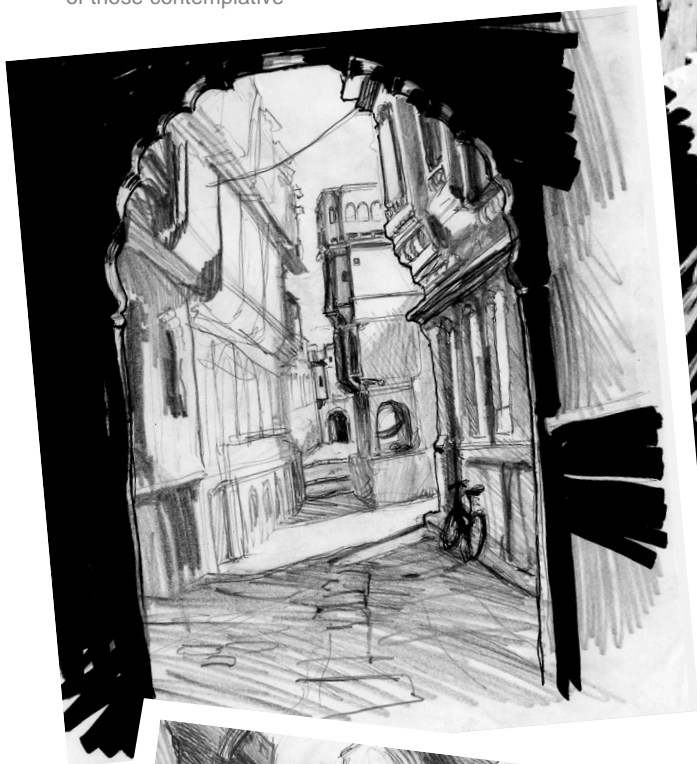
Ronan: The design and the storyboard process took us a very long time and we went through a lot of different storyboards. But it was very important to have a good basic structure in order to be able to spend more time on details later.

Joaquim: We first did a huge amount of

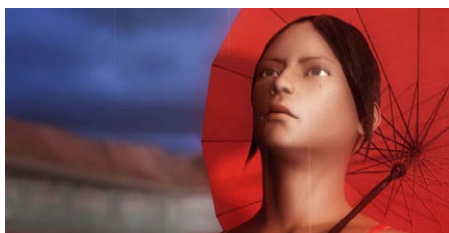
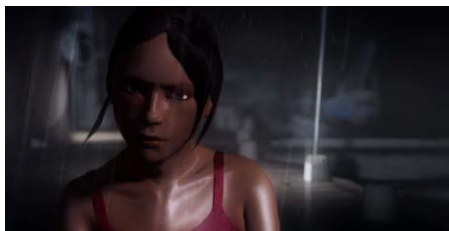
“FUNNILY, WITH THE SAME SETTING AND THE SAME MOOD, WE WERE GOING TO MAKE A FILM ABOUT A LONE FISHERMAN ATTACKED BY A SEA MONSTER.”

Can you tell us a little about the layout and animatic stages?

Patrick: We decided early on to push both the animatic and the layout to very advanced states. The composition of the shots, the editing, the

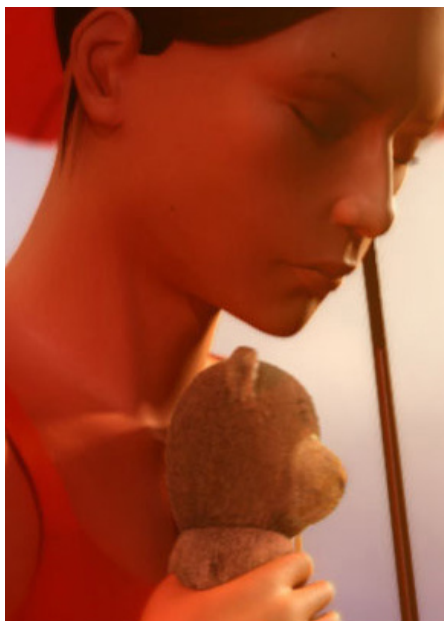






audio editing...We really wanted to have a first shot on everything.

Joaquim: I think the layout was a very important part of the production. For us, it was essential to have a clear vision of how the movie could look like in the end. Even if many designs changed afterwards, daring to give a first shot by drawing the first streets, the early design of the woman and the evolution of the light, was for us a good way to sort out things.

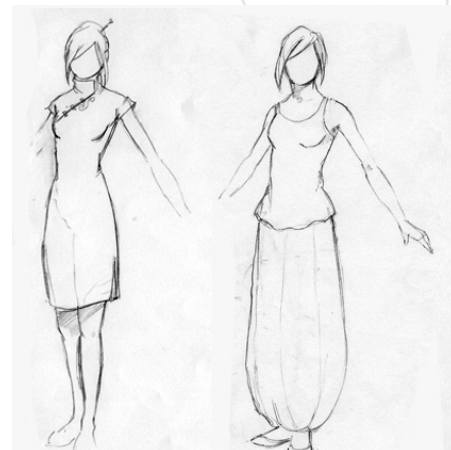


The main character's model, what software was used to create her? Can you tell us a bit about the creation process?

Joaquim: We used 3DS Max for all the shots in the movie. We had many photo references.

Patrick: At first, we intended to rely heavily on photographic references of non-famous women. However, as we were never satisfied, we just went ahead and made her unique, bearing no resemblance to anyone.

"WE DECIDED EARLY ON TO PUSH BOTH THE ANIMATIC AND THE LAYOUT TO VERY ADVANCED STATES."





The lighting and colours are possibly the most beautiful I have ever seen in a CG film (and I have seen a lot!) What renderer did you use for the lighting and was there a lot of post work to achieve the colours you wanted in each scene?

Ronan: Thank you very much! The use of After Effects and the camera map technique helped us to give a very "2D-ish" look to the movie. It was one of our goals to get such a warm and coloured quality of image with a kind of ethereal feel to it.

"THE TRICKIEST PART WAS TO HAVE A GOOD PROGRESSION OF THE LIGHT DURING THE MOVIE, AND STILL TO HAVE THIS CONTINUITY BETWEEN THE SHOTS."

Joaquim: Many thanks! Even though all the shots are full 3D, it was essential to work with a 2D post-production software like After Effects to have full control over the

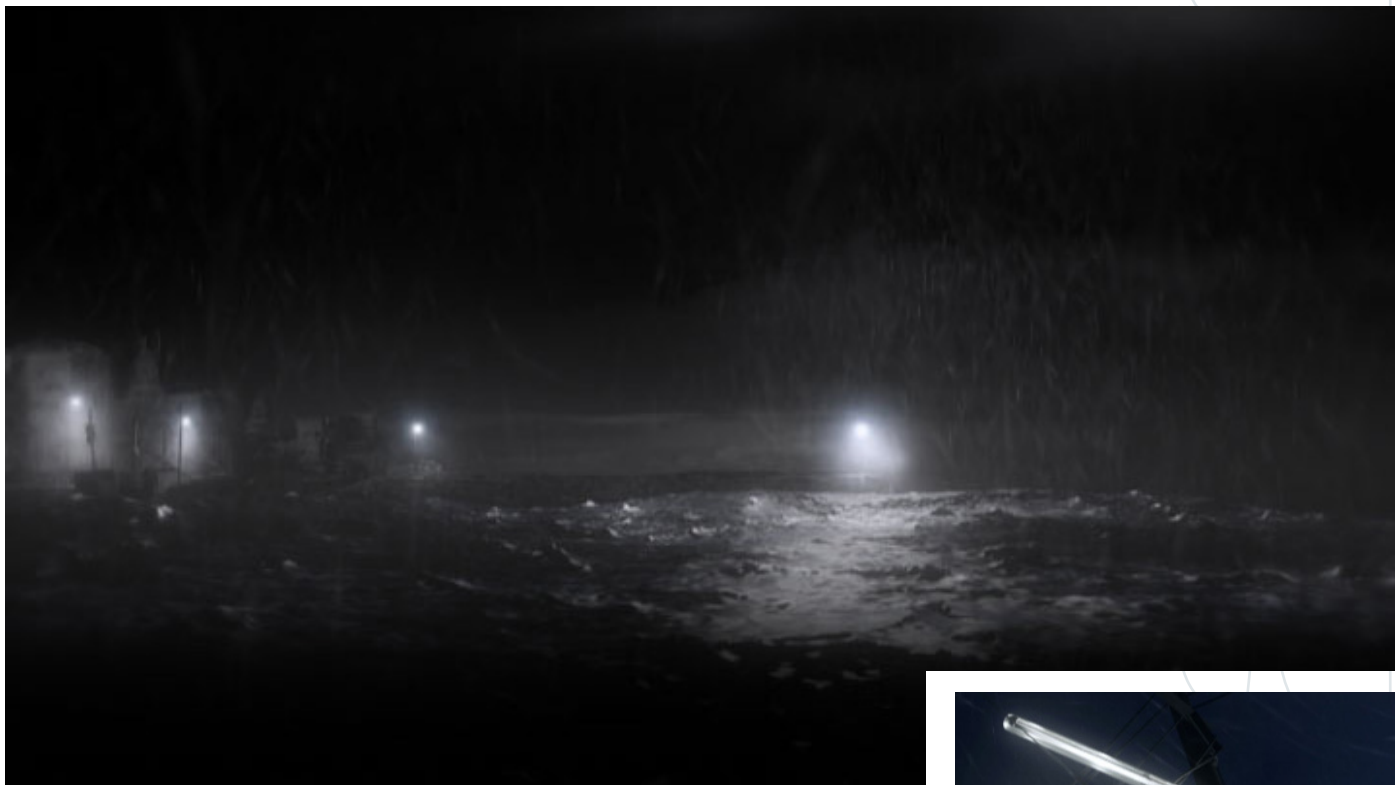


colours and the lightings. The trickiest part was to have a good progression of the light during the movie, and still to have this continuity between the shots. Fin d'été begins with a lot of orange/purple

then switches to electric blue and finishes with black and white. We also worked with Photoshop, rendering a draft image with Max, and then changing the colours very quickly to try out different things.







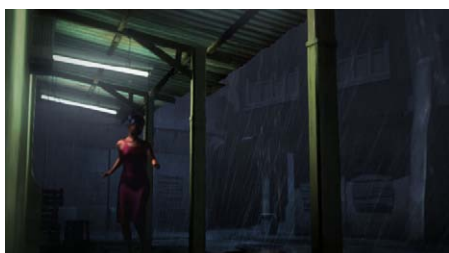
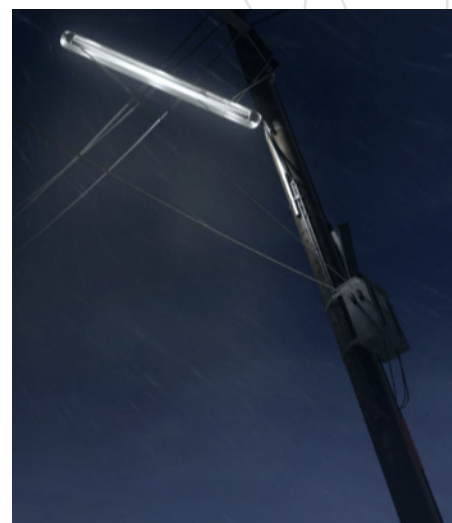
The weather effects and dynamics (such as the dress and swings) are just amazing, did one of your team specialise in these? Can you again tell us a little about how they were achieved?

Joaquim: Most of the time, it's a mix of hand animation and generated dynamics. If we really wanted to have a specific animation, like the swings for instance or most of the environmental objects, we did it by hand. As a reference, we sometimes took some generated dynamics, videos from movies or even meteorology-related websites.

Patrick: As in every part of the film, each one of us was involved with these. There was a lot of playing around with different particle

engines, cloth simulations and rigging systems in order to obtain the quickest calculation and rendering times.

“IF WE REALLY WANTED TO HAVE A SPECIFIC ANIMATION, LIKE THE SWINGS FOR INSTANCE OR MOST OF THE ENVIRONMENTAL OBJECTS, WE DID IT BY HAND.”







Your flash site complements the film perfectly, who was responsible for this? Would you recommend other filmmakers to present their work like this?

Patrick: The web designer is Antoine Menard (konky.com) and we are very thankful for his brilliant work.

He's a very talented guy who's starting a promising career. Anyway, I definitely recommend filmmakers to try to go beyond a simple html or ImageReady website to present their creations. It's part of all these little things that help create a world around the film, like the choice of a good title font or the cover image of the DVD.

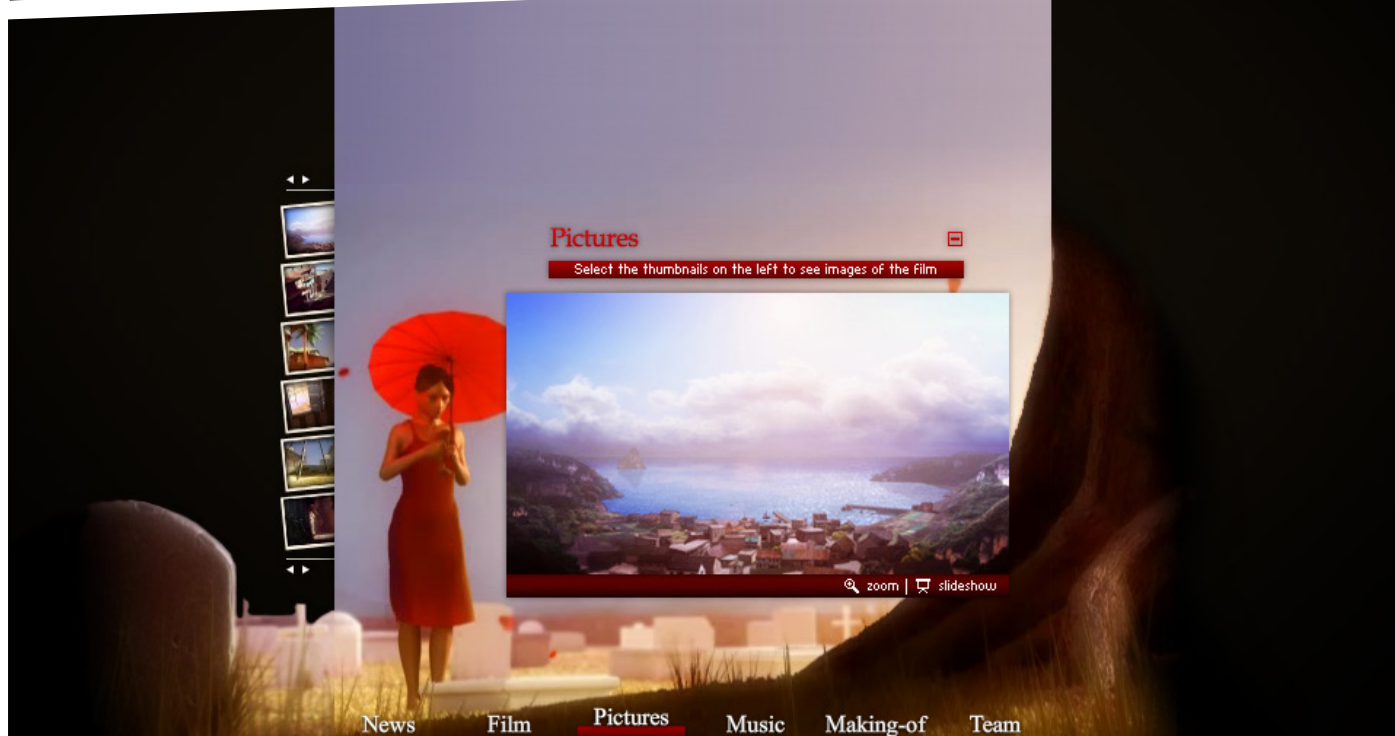
Joaquim: The website really acts as an introduction to fin d'été. It

helps to get you in the mood for watching the film. By showing some sketches or making you listen to the music, we also wanted to illustrate that there was more than just the film and that we created a whole world around it. I do recommend other filmmakers to build a website that matches their movie.

**"HE'S A VERY TALENTED GUY WHO'S STARTING A PROMISING CAREER."**

Now you have made a short CG film what advice would you give to others who would like to follow in your footsteps?

Ronan: Do whatever you want. It is very rare to have a full control over a film, from the first ideas to the final realization. It was a real luxury and very enjoyable! Moreover, I believe it is only possible in a school, without any economic pressure or influential producers.





**Joaquim:** My advice would be to make the movie that they really want, to build their own universe. When you have the chance to build your story and your characters, it's really important for me to keep in mind that it's a chance that might not show up a second time.

**Patrick:** I totally agree with Jo and Ron. Don't try to make a copy of a film that already exists. And even if you adore it, at least take this inspiration and apply it to a more personal and profound universe. Trying to copy Hollywood or TV is not an achievement. You can do better, in your own way.

**What you guys up to now? Any dream ambitions for the future?**

**Patrick:** I work for Sony Games/Ninja Theory in Cambridge, UK. I'm really interested in the current evolution of video games towards

less childish themes and more immersive experiences. I'm also working on some very short animations, because I know it's hard to carry on large personal projects outside one's job. Ultimately, I'd love to create a "short game", like a short film.

**"MY ADVICE WOULD BE TO MAKE THE MOVIE THAT THEY REALLY WANT, TO BUILD THEIR OWN UNIVERSE."**

**Joaquim:** I'm working at Digital Magic FX Bangkok, in Thailand, trying to deal with the Thai language. For the moment, I'm getting some experience on quick and various projects like commercials, cinema features and visual effects, but I still do personal work on my spare time, and I'm eventually thinking of a new story for an upcoming project.

**Ronan:** I'm working in Paris for various companies producing commercials and video games cut scenes. I am also involved in several graphic novel projects and have a few ideas for short films. But right now, I consider myself as a rookie in computer graphics. I still have a lot to learn...

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Article By :  
**TOM GREENWAY**



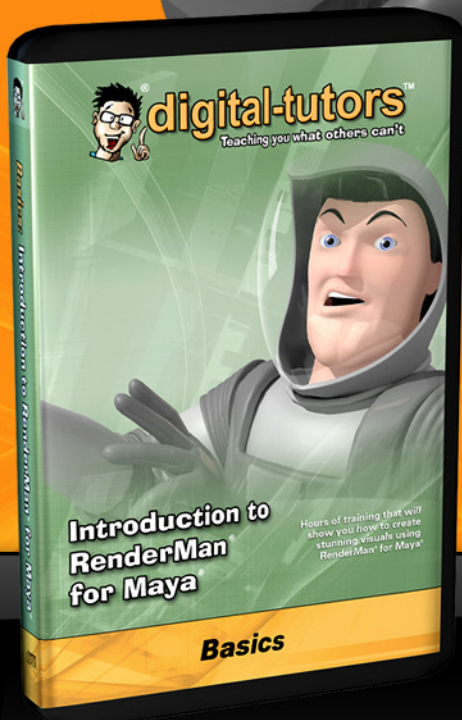




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- Chris Ford  
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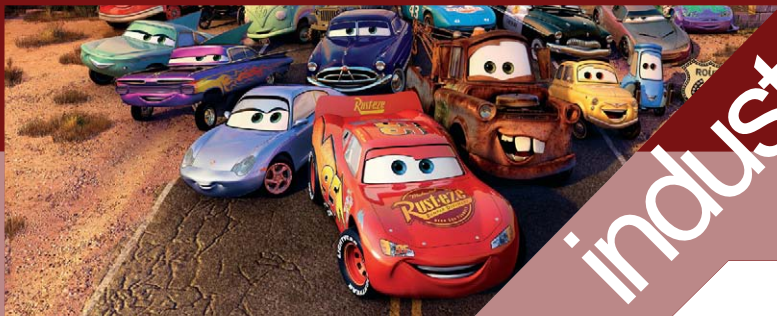


# tuning up

## Cars

After taking moviegoers magically into the realm of toys, bugs, monsters, fish, and superheroes, the masterful storytellers and technical wizards at Pixar Animation Studios ("The Incredibles," "Finding Nemo," "Monsters, Inc."), and Academy Award®-winning director John Lasseter ("Toy Story," "Toy Story 2," "A Bug's Life"), hit the road with a fast-paced comedy adventure set inside the world of cars.





Industry



## CARS PREVIEW

After taking moviegoers magically into the realm of toys, bugs, monsters, fish, and superheroes, the masterful storytellers and technical wizards at Pixar Animation Studios ("The Incredibles," "Finding Nemo," "Monsters, Inc."), and Academy Award®-winning director John Lasseter ("Toy Story," "Toy Story 2," "A Bug's Life"), hit the road with a fast-paced comedy adventure set inside the world of cars. A Pixar Animation Studios film presented by Walt Disney Pictures, "Cars" is a high octane delight for moviegoers of all ages, fueled with plenty of humor, action, heartfelt drama, and amazing new technical feats. Adding to the fun is a driving score and new song by Oscar®-winner Randy Newman, along with original musical performances by such top talents as Sheryl Crow, James Taylor, Brad Paisley,

Rascal Flatts, and John Mayer. Lightning McQueen (voice of Owen Wilson), a hotshot rookie race car driven to succeed, discovers that life is about the journey, not the finish line, when he finds himself unexpectedly detoured in the sleepy Route 66 town of Radiator Springs. On route across the country to the big Piston Cup Championship in California to compete against two seasoned pros, McQueen gets to know the town's offbeat characters – including Sally (a snazzy 2002 Porsche voiced by Bonnie Hunt), Doc Hudson (a 1951 Hudson Hornet with a mysterious past, voiced by Paul Newman), and Mater (a rusty but trusty tow truck voiced by Larry the Cable Guy) – who help him realize that there are more important things than trophies, fame and sponsorship. The all-star vocal cast also includes free-wheeling performances by Tony Shalhoub, Michael Keaton, Cheech Marin, George Carlin,

Katherine Helmond, and perennial Pixar "good luck charm," John Ratzenberger. Michael Wallis, author of the critically acclaimed book, Route 66: The Mother Road, and the authority on that famous road, is heard in the film as the voice of the Sheriff of Radiator Springs. Delivering more fun and authenticity to the vocal cast for "Cars" are performances by some of the all-time greatest names from the world of racing, including the legendary Richard Petty, plus "drive-on" roles by Mario Andretti, Dale Earnhardt, Jr., Darrell Waltrip, and Michael Shumacher, the ace German Formula 1 champ who is widely considered to be today's best Grand Prix racing driver. "Cars" was co-directed by Joe Ranft, who also served as head of story for the film and voiced several incidental characters. One of the most gifted and respected story artists in modern day animation, and the congenial voice behind





such favorite Pixar characters as Heimlich the caterpillar ("A Bug's Life"), Wheezy the penguin ("Toy Story 2"), and Jacques the shrimp ("Finding Nemo"), Ranft passed away in August, 2005. He had collaborated with Lasseter on all three of his previous feature directing efforts, and had been a key creative force at Pixar for over a decade. Serving as the film's producer was Darla K. Anderson, a

Pixar veteran whose previous producing credits include "A Bug's Life" and "Monsters, Inc." Combining her technical expertise with her tremendous respect and knowledge of the creative process, Anderson guided all aspects of the production and helped support Lasseter's vision from the start. The film's associate producer was Tom Porter, a technical pioneer in the world of computer animation who has been part of the Pixar inner circle since its inception.






## TUNING UP THE STORY

"Cars" was a very personal story for John Lasseter. As a boy growing up in Los Angeles, he loved to visit the Chevrolet dealer where his father was a parts department manager, and got a part-time job there as a stock boy as soon as he turned 16. According to Lasseter: "I have always loved cars. In one vein, I have Disney blood, and in the other, there's motor oil. The notion of combining these two great passions in my life — cars and animation — was irresistible. When Joe (Ranft) and I first started talking about this film in 1998, we knew we wanted to do something with cars as characters. Around that same time, we watched a documentary called 'Divided Highways,' which dealt with the interstate highway and how it affected the small towns along the way. We were so moved by it and began thinking about what it must have been like in these small towns that got bypassed. That's when we started really researching Route 66." During the summer of 2000, Lasseter's wife, Nancy, persuaded him to take a much-needed vacation. The entire family packed up a motor home, and set out on a two-month trip with the goal of staying off the interstate highways, and dipping their toes in the Pacific and Atlantic Oceans. Lasseter observed: "When I came back from the trip, I had reunited with my family and we were closer than ever. And I suddenly realized that I knew what the film needed to be about. I discovered that the journey in life is the reward. It's great to achieve things, but when you do you want to have your family and friends around to help celebrate. Joe loved the idea and our story really took off from there. Our lead car, Lightning McQueen, is focused on being the fastest. He doesn't care about anything except winning the championship. He was the perfect character to be forced to slow down, the way I had on my motor home trip. For the first time in my professional career I had slowed down, and it was amazing. The unique thing about Pixar films is that the stories come from our hearts. They come from things that are personal to us, and that move us. This gives special emotion and meaning to the films." In 2001, Lasseter, Ranft, producer Darla Anderson, production designers Bob Pauley and Bill Cone, along with other key





members of the production team flew to Oklahoma City and headed out from there in a caravan of four white cadillacs on a nine-day trip along Route 66. Historian/author Michael Wallis led the expedition, and introduced them to the people and places that make that road so very special. At each stop along the way, the team observed firsthand the "patina" of the towns, and tried to capture the richness of textures and colors. Painted advertisements on the sides of buildings, weathered and overlaid, were of particular interest. Careful studies were made of rock and cloud formations, and the variety of vegetation along the way.



## LIGHTNING MCQUEEN

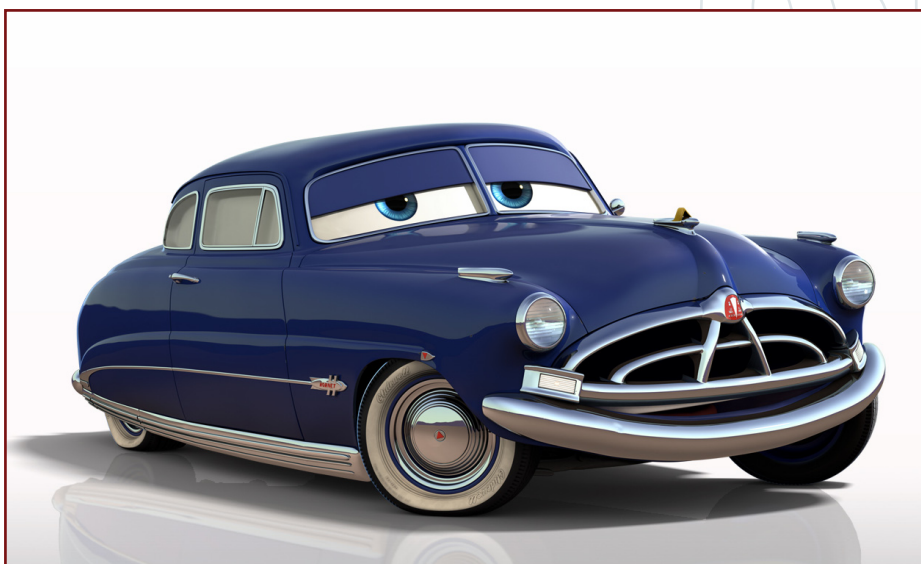
Poised to become the youngest car ever to win the Piston Cup Championship, this hotshot rookie racecar has just two things on his mind – winning and the perks that come with it. But when he gets detoured in the forgotten town of Radiator Springs and has to shift for himself, he gets a crash course on what matters most in life. Owen Wilson is up to speed as the voice of this cocky racecar with a carburetor of gold.

## DOC HUDSON

A seemingly quiet country doctor (mechanic) with a mysterious past, this 1951 Hudson Hornet is a cornerstone of Radiator Springs, and also serves as town judge. Respected and admired by the townsfolk, Doc is a car of few words, and is unimpressed by the town's newest arrival – Lightning McQueen. The speed-obsessed hotshot racecar dismisses Doc as just an old Grandpa car, but comes to discover that the old timer still has a few tricks under his hood. Acting legend, Oscar®-winner, and Guinness Book World Record Holder (the oldest driver to win a professionally sanctioned race in 1995 in Daytona) Paul Newman gives a winning performance as the voice of this charismatic car.

## SALLY

This sporty 2002 Porsche 911 from California grew tired of life in the fast lane, and made a new start for herself in Radiator Springs. As the proprietor of the Cozy Cone Motel, and one of the town's most optimistic boosters, she has high hopes that it will one day return to its former glory, and wind up "back on the map." She takes an instant shine to Lightning McQueen, and helps to steer him in the right direction. Multi-talented actress/filmmaker Bonnie Hunt gives a premium performance as Sally, with just the right blend of charm, intelligence and wit.







## MATER

This good ol' boy tow truck with a big heart may a bit rusty on the outside, but he has the quickest towrope in Carburetor County and is always the first to lend a helping hand. Sweet and loyal to a fault, Mater befriends McQueen and sees his potential as his new best friend, despite his many flaws. The self-proclaimed "world's best backwards driver," Mater gets his kicks "tractor tipping" when he's not running "Tow-Mater Towing and Salvage." Comedy sensation Larry the Cable Guy gives a "tow-de-force" vocal performance that is both hilariously funny and touching.



## FILLMORE

Radiator Springs' resident hippie is a 1960 VW bus who brews his own organic fuel and preaches its many benefits. Visitors can check it out for themselves in the tasting room behind his love-bead and tie dye covered geodesic dome. His conspiracy theories and unkempt yard don't sit well with his neighbor, Sarge, but despite their frequent disagreements, they can't live without one another. Comedy legend George Carlin gives a far-out performance as the voice of this peace-loving bus.



## SARGE

This patriotic 1942 WWII Willy's Army jeep runs Radiator Springs' army surplus store, Sarge's Surplus Hut, and is often found manicuring the lawn in front of his Quonset hut into a precise flat-top. Although he likes to complain about his VW bus neighbor, he knows that life is more interesting with Fillmore around. Actor Paul Dooley ("Breaking Away," "Desperate Housewives") sounds off as this regimented vehicle whose bark is worse than his bite.



## RAMONE

The proprietor of Ramone's House of Body Art, this 1959 Impala low-rider is a true magician with paint and metal, but he hasn't had anyone to paint in years. While waiting for a paying customer to come along, he re-paints himself daily and hopes that McQueen will consent to letting him add a few new flourishes. Comedian/actor Cheech Marin turns in a colorful performance as the voice of this feisty fellow.



## FLO

Married to Ramone, and the owner of Flo's V-8 Café, is this sassy, no-nonsense 1950s show car. Offering the "finest fuel in fifty states," Flo's is a popular gathering spot for the locals to sip some oil, share some gossip, and listen to a little motherly advice from Flo herself. It was love at first sight for Flo and Ramone, ever since they met when she was traveling across country as a glamorous Motorama girl. Jenifer Lewis goes with the "flo" as the voice of this spirited character.



## LUIGI

Big-hearted, gregarious, and excitable, this 1959 Fiat 500 runs the local tire shop, Luigi's Casa Della Tires, which is the "Home of the Leaning Tower of Tires." With his forklift pal, Guido, by his side, Luigi is an avid racecar fan (with a bias towards Ferrari's) who is always eager to please. Business hasn't been good in years, so you can always count on a bargain on a new set of wheels from this merry merchant. Tony Shalhoub ("Big Night," "Monk") puts the accent on comedy in this tireless performance.







**SHERIFF** – Route 66 expert/author Michael Wallis provides the voice of this 1949 Mercury Police Cruiser, sworn with upholding the peace in Radiator Springs. Always on the prowl for would-be speeders who might want to barrel through his town, Sheriff enjoys telling stories about his beloved Mother Road, and taking the occasional nap behind the town's billboard.

### THE KING (aka Strip Weathers)

This 1970 Plymouth Superbird is a racing legend who has won more Piston Cups races than any other car in history. Despite his fame, he's a down home guy, who knows it takes more than trophies to make a true champion. He believes in hard work, team playing, and making time for his wife, the Queen. Set to retire at the end of the season and relinquish his coveted Dinoco sponsorship, the King is the envy of all the up-and-coming racers. Racing legend Richard Petty, a seven-time NASCAR winner, lends his voice to this classy champ. His wife, Linda, provides a cameo voice as the Queen.



### CHICK HICKS

This racing veteran is a ruthless competitor, who has bumped and cheated his way into more second place finishes than any other car. Forever living in the King's shadow, he's the consummate runner-up and will stop at nothing to win the Dinoco sponsorship. Convinced that "the Chick era" is about to begin, he isn't about to let Lightning McQueen get between him and his dream of winning the Piston Cup. Versatile actor Michael Keaton ("Mr. Mom," "Batman," "Herbie: Fully Loaded") gets down and dirty as the voice of this hard-driving road warrior.





## MACK

No Pixar film is complete without a vocal performance by John Ratzenberger, and in "Cars," the popular actor weighs in as the voice of a 1985 Mack Super-Liner who has a thorough knowledge of Federal regulations. As McQueen's trusted driver, he is willing to push the limits of his own sanity and sleep requirements to accommodate his celebrity employee. McQueen's luxurious bachelor pad is fully loaded with the best in fiber optics, TVs, a massage chair, and more.



## DESIGNING AND ANIMATING THE LATEST MODELS

Lasseter's mandate to have the car characters look as real as possible posed some daunting new challenges for Pixar's technical team. Having a film where the characters are metallic and heavily contoured meant coming

up with resourceful ways to accurately show reflections. "Cars" is the first Pixar film to use "ray tracing," a technique which allows the car stars to credibly reflect their environments. The addition of reflections in practically every shot of the film added tremendous render time to the project. The average time to render a

single frame of film for "Cars" was 17 hours. Even with a sophisticated network of 3000 computers, and state-of-the-art lightning fast processors that operate up to four times faster than they did on "The Incredibles," it still took many days to render a single second of finished film. Lasseter also insisted on "truth to materials," and instructed the animation team not to stretch or squash the cars in a way that would be inconsistent with their heavy metal frames. The animators did a lot of "road testing" to get the characters to behave in a believable and entertaining way, and found ways to add subtle bends and gestures that were true to their construction. The animators also discovered how to use the tires almost as hands to help them with their performance.

"CARS" will be released on June 9th 2006 in the US. All other dates to follow.

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industry

## STARDUST

BRINGS MOTION GRAPHICS  
“A”-GAME TO WEB-ONLY  
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R/GA

HOLLYWOOD—(May 25, 2006)—Bicoastal creative production company Stardust Studios ([www.stardust.tv](http://www.stardust.tv)) is very proud to detail its recent work for R/GA, the advertising agency for the digital age, on a web-exclusive 1:39 brand video entitled “What’s Your Game About” for Nike Brand. In developing the project, R/GA’s creative team called upon Stardust to provide original design and animation custom-tailored to Nike’s Flight, Force and



Uptempo brands, which are showcased in the finished piece. The video is currently featured on NikeBasketball.com. To quickly execute the designs envisioned by art directors Felipe Posada and Doug Purver, Stardust’s team

managed the workflow from New York while also enlisting support from the company’s Santa Monica studio. Purver also served as lead animator, and together with animator Daniel Garcia and 3D artist Cary Janks,







the team created elements that organically enhance the stylishly edited live-action footage of NBA star players, while also heightening the visual impact of the messaging.

Stardust's team also included executive creative director Jake Banks, executive producer Eileen Doherty and senior producer Michael Neithardt, and their team's work involved the artistic use of Maya, Cinema 4D, and Adobe After Effects and Creative Suite.

"The creatives from R/GA gave us the unique opportunity to create some really elegant animation to visually take this project to another level," Banks explained. "Even though it was for web-distribution only, we approached it the same way we do every high-end broadcast project we handle. We're all proud of how it came out – and we're also very grateful for this opportunity to work with R/GA and Nike Brand."

## ABOUT STARDUST STUDIOS

Stardust is an award-winning creative production company, specializing in motion design, animation, visual effects and live-action production. Led by executive creative director Jake Banks, Stardust's Santa Monica and New York offices continually redefine cutting-edge aesthetics for commercial, on-air, music video and in-store presentations. Their recent work – including projects for the world's top ad agencies, brands and recording artists – has earned numerous awards and worldwide editorial exposure. For more information, please visit [www.stardust.tv](http://www.stardust.tv) or call Eileen Doherty at 310.399.6047.

The Full short can be downloaded from [here](#)

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# KING KONG

A SHORT HISTORY OF A GIANT MOVIE STAR

By Pierfilippo Siena







## A SHORT HISTORY OF A GIANT MOVIE STAR

Academy Award winner for best directing, the real Lord of the Ring trilogy master Jackson and his wife and screenwriter Fran Walsh saw their life change forever after watching Merian C. Cooper and Ernest B. Schoedsack's black and white masterpiece many, many years ago. However, he could have never remade his all time favourite movie without the very cooperative effort of both digital technology and Weta divisions. During the Academy Award 2006 annual ceremony, the new King Kong won three Oscars for best sound editing, best sound effects and best visual effects, defeating ILM's War of the Worlds directed by Steven Spielberg and Rhythm & Hues' The Chronicles of Narnia: The Lion, the Witch and the Wardrobe by Andrew Adamson.







Weta continue to lead the pack in the visual effects universe after three awards for the 'Lord of the Rings' trilogy, the nomination for 'I, Robot' directed by Alex Proyas and the very effective work for 'Master and Commander' by Peter Weir. Even Spectacular space adventure Star Wars Episode III: Revenge of the Sith failed to obtain a nomination for VFX, as two times Oscar winner visual effects supervisor Joe Letteri, animation director Christian Rivers, on-set supervisor Brian Van't Hul and models, miniatures, props, creatures and special make-up supervisor Richard Taylor won the Academy Award for King Kong.

In the last 40 years, the giant ape has starred in several motion pictures. Sometimes the films were very serious productions, sometimes they were ridiculous. In a brief history of movie-legend Kong, dubbed the eighth wonder





of the world, King Kong, the fictitious giant gorilla, started his motion picture career with the 1933 stop-motion miniature animated by Willis H. O'Brien who was born on March 2nd 1886, Oakland, California USA. O'Brien also performed a miracle of convincing animation work for the 1925 silent movie *The Lost World*, directed by Harry O. Hoyt from a novel written by Sherlock Holmes creator Sir Arthur Conan Doyle. In those early motion picture times, he demonstrated that he could design, build and animate tiny dinosaurs models in very detailed miniature sets. The basic stop-motion principle originates from 2D cel animation, a special effects technician builds a ball-and-socket metal armature covered with rubber, hand-sculpted, skin, and moves the creature one frame at a time, then again and again and again. each step photographing the position. Once the images are projected





onto a large screen in quick sequence, movement is achieved. The creature would appear to be living in a three-dimensional world. At 24 frames per second this can be an excruciatingly tedious process. The 1933 *King Kong* was hailed as a movie-classic because the special effects successfully supported the story, although it was a far cry from today's standards of animation. With no motion-blur achievable both the Kong and the Skull Island creatures' models seemed to 'strobe' their movements, however at the time this was of little concern to the filmmakers. In 1962, legendary Japanese director Ishiro Honda directed *King Kong vs. Godzilla* (King Kong tai Gojira in Japanese) but the giant ape was portrayed by an actor wearing a gorilla suit, acting in miniature sets built and photographed by the late effects expert Eiji Tsuburaya. In 1976, Italian tycoon Dino DeLaurentiis produced a remake directed by colossal-expert British director John Guillermin. This film introduced beautiful actress Jessica Lange,



as King Kong's sacrificial victim Dwan, and co-starred Jeff Bridges and Charles Grodin with an original musical score composed by John Barry. Italian creature creator and three times Academy Award winner for best special effects Carlo Rambaldi designed and constructed a giant mechanical Kong-arm, an ape suit and a mechanized facial mask to be worn by make-up artist Rick Baker (*Planet of the Apes*, *An American Werewolf in London*, *Men*

*in Black*, *Men in Black II*, *Wolf*). Aldo Puccini directed the miniature sets construction, Glen Robinson assisted Rambaldi and was assigned to create all the physical and pyro effects. Photographic and optical effects specialist Frank van der Veer supervised all the blue-screen work and optical composites. A giant mechanical version of Kong never existed as a "walking" machine and Jessica Lange was shot tied by the gorilla's hand in





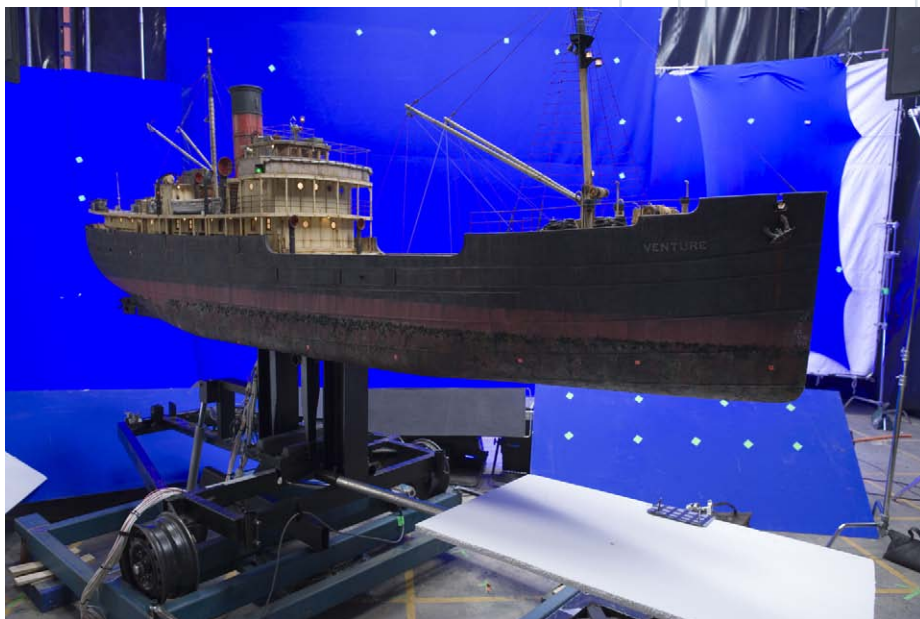
front of the blue-screen and then optically composited with Rick Baker's mask close-ups. John Guillermin's King Kong modern version earned an Academy Award for the Best Visual Effects assigned to Carlo Rambaldi, Glen Robinson and Frank van der Veer. In 1986, Dino De Laurentiis again produced a 1976 King Kong sequel titled King Kong lives. Commercially speaking, De Laurentiis and DEG company suffered heavy money losses caused by a disastrous movie flop, as big commercial failures as the later movies David Lynch's Dune and Richard Fleischer's Conan the destroyer. King Kong lives was complete box-office failure. The movie began where the previous one ended. Kong was mortally wounded on the top of the Empire State building skyscrapers after destroying one of the U.S. Navy combat helicopters attacking him. But he's not dead, taken in a medical center in Atlanta he continues to live via mechanical devices for almost ten years. Meanwhile, a female giant gorilla is captured in the Borneo and taken in the United States of America. Here, King Kong receives an artificial heart,



escapes, fights and then meets Lady Kong. In the movie's finale, Kong dies killed by U.S. Army tanks when Baby Kong is born... Peter Jackson originally planned to produce and direct his version of the King Kong story in the middle of the 1990's but Disney's 'Mighty Joe Young' remake delayed the project. After the worldwide success of the 'Lord of the Rings' trilogy, Jackson convinced Universal Studios to finance a 207 million dollar (us) Kong remake involving 'The Ring' star Naomi Watts, Academy Award winner Adrien Brody, Jack "School of Rock" Black and the visual effects talents at Weta Digital and Weta Workshop. Founded by Peter Jackson with Richard Taylor and Jamie Selkirk, Weta's adventure in the visual effects domain began with the production of 30 digital effects shots with a single, rented graphic workstation for 1994 drama Heavenly Creatures, based on the true story of Juliet Hulme and Pauline Parker, two close friends who share a love of fantasy and literature, who conspire to kill Pauline's mother

when she tries to end the girls' intense and obsessive relationship. Shortly afterwards was Universal Pictures' "ghostly" extravaganza, 'The Frighteners' starring Michael J. Fox. Once Weta started work on 'The Frighteners', the effects facility expanded itself up to 20 digital artists in order to produce almost 570 fx shots.

Since then Weta has produced effects for the Lord of the Rings triumph, followed by Master and Commander and I, Robot. Weta has two divisions, Weta Digital and Weta Workshop. The Weta Workshop is a highly specialized facility producing special make-up, animatronic creatures, models, maquettes and miniatures.







Inside Weta Digital are working digital effects wizards, creators of both Kong and the Skull Island monsters. Director Jackson however constantly believed that huge big-budget projects like the 'Lord of the Rings' trilogy and 'King Kong' could not be based solely on CGI effects. For this reason, he has always preferred the use of photographing large scale models to create his incredible worlds of fantasy. And, if a well constructed and photographed miniature is real and three dimensional, it duplicates that reality on screen.

Weta Workshop conceptualised the environments, fauna and flora of Skull Island, the dinosaurs, creatures and natives of this inhospitable land, and of course the giant gorilla himself, Kong. Initially the workshop produced the scannable maquettes of the creatures, the miniatures, special make-up effects, native costuming and weapons for the film. Modelmakers John Baster and





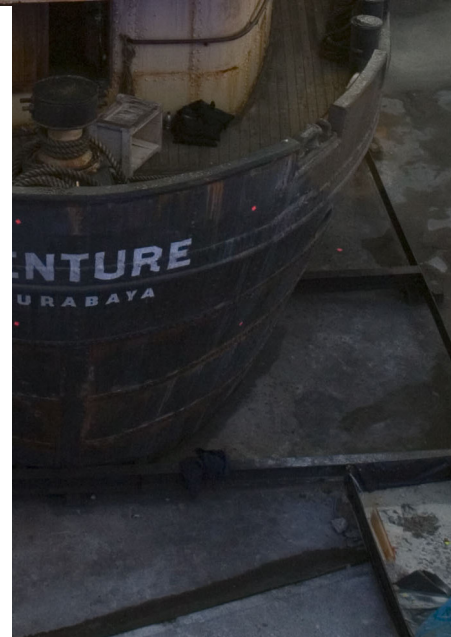
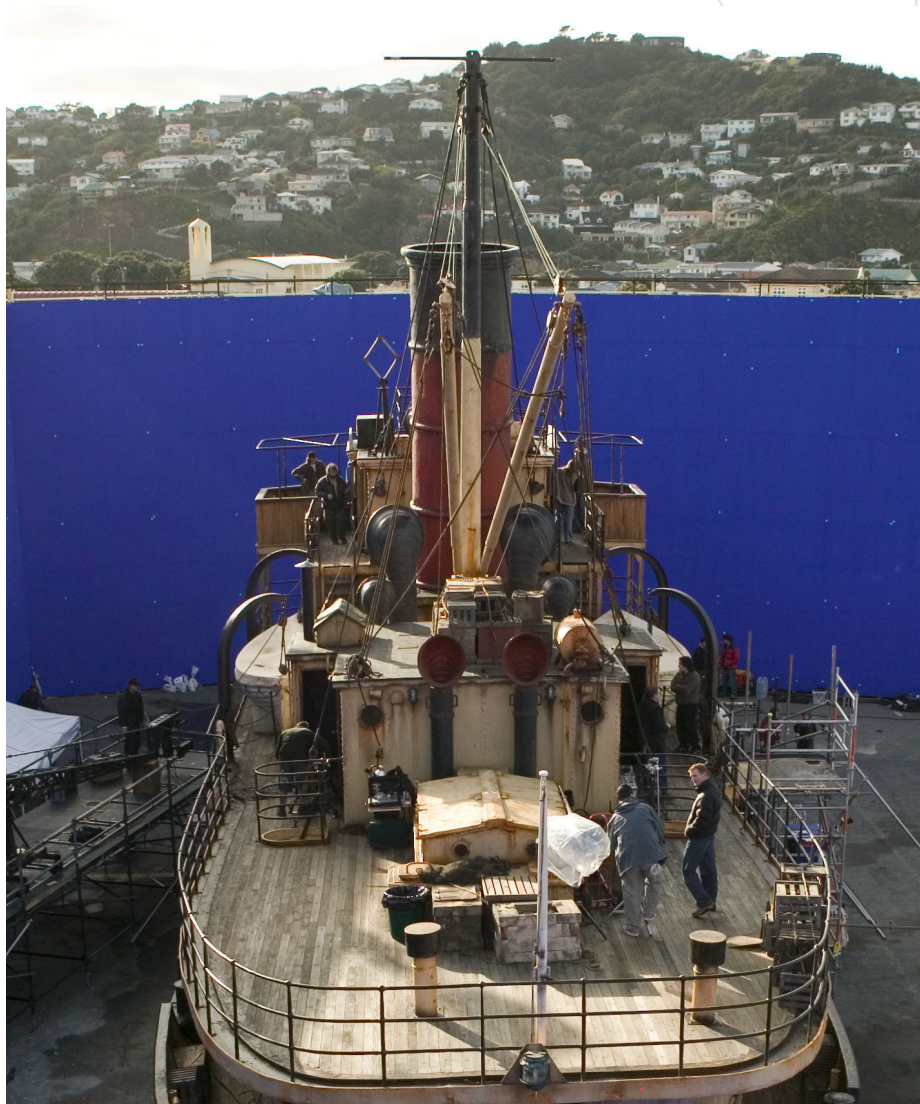








Mary MacLachlan were then given the task of building a perfect replica miniature Skull Island with winding shaped tree trunks and leaves, bushes and small stones (mostly from cat's litter trays and very effective as real rocks). A large 1/12 S.S. Venture ship motion-control model was also built. Skull Island was inspired by the original matte paintings created for the 1933 iconic movie. The back section of the Venture ship was built in 1/1 scale, surrounded by a blue-screen, for live-action shooting. The blue-screen was necessary to allow digital compositing with the ocean's fluid simulation, background plates and digital matte-paintings. All compositing work was done using Apple's Shake. The 1/12 scale motion-control blue-screen miniature was capable of three axis motions: roll, pitch and yaw. Rolling is motion around the longitudinal axis. Pitching is motion around the transverse axis and yawing is motion around the vertical axis. The model ship couldn't go up and down but this particular motion was created by the motion-control camera itself and the miniature was photographed in separate light passes by director of model photography Alex Funke. Under the ship's waterline there were red markers to help camera tracking





and compositing work. Weta Workshop also built the ancient Skull Island containment wall and the ruins of a civilization. Peter Jackson shot his King Kong remake mainly in the Stonestreet Studios sound stages whose sets were surrounded by blue-screen and green-screen to be composited by Weta Digital via digital matte-paintings, miniatures, photorealistic set extensions and digital environments. Sometimes, high resolution digital tree stills were mapped onto 2D cards. Because the filmed elements and digital stills were shot during principal photography, the results matched the lighting in the plates. Sometimes the digital artists projected filmed elements onto 2D cards, sometimes they projected the photos onto 3D geometry, and sometimes they used the photos to create 3D geometry. With the city shots, towards the latter part of the film, the goal was to create a photorealistic environment as accurate to



1933 New York as possible. Coinciding with the digital work, there was also a New York set built in New Zealand. This set was built up to the first story, with digital extensions to be added later to complete the scene. For specific landmark buildings, Weta Digital modellers worked off blueprints and period photo references and each of these buildings had to be hand modeled. For the thousands of other buildings the task would be much too time consuming to model by hand. Because of this Weta Digital Computer Graphics supervisor Chris White began to develop a proprietary software called the "CityBot", \*(full name : 'CityBot-Urban Development Software', "Bot" for short). This very innovative software created procedural 3D buildings to be rendered using Pixar's RenderMan and the final result was over 90,000 3D buildings. In fact, all of Manhattan Island was in 3D as well as parts of New Jersey, Brooklyn, and Queens! The whole cityscape was surrounded by a matte-painting



mapped onto a 360° cyclorama as a skyline. Each of the buildings of Manhattan was unique and built to the finest level of detail. To bring the city to life, traffic, boats, working chimneys, factories and trains were also added. Before the CityBot work, digital artists used a simplified 3D map called "Guide Geo" to define an accurate skyline to a 1933 New York. They started by acquiring top-print data of modern New York, then converted using AutoCad into a 3D map. In order to make the map 1933 compliant they needed to identify and replace each building that was constructed post 1933, then removed and replaced with those old ones modeled by hand by using period photographs from multiple camera angles. The CityBot-Urban Development Software was written in Autodesk Maya, the principal modelling and animation tool used for King Kong. At street level, sets were constructed in the studios backlot up to the first story with all extensions to be done digitally. Blueprints for the original set construction were required to model the upper floors. Hundred of unique signs were designed and painted. Each walking person was carefully rotoscoped so that artists could render building extensions behind them while texture maps and rendering were matched with the filmed bottom floor. Buildings across the street were rendered to reflect in the glass store front windows. Sometimes city street traffic as well as "new yorkers" were real cars, men and women, sometimes they were rendered using the proprietary crowd simulation software 'Massive'. This tool generated thousands of digital 'agents' to replace real cars and people, the programmers also taught to their Artificial Intelligence to "drive" dangerously like real new yorkers drivers!











Some years ago during the Ring trilogy, Gollum/Smeagol was the most "actor-controlled" CGI creature in all movie history. This time, British actor Andy Serkis was tasked again with creating both the facial and body performances to bring King Kong to

life. Weta Digital 3D modellers and animators used Autodesk's 'Maya' for the giant gorilla as well as for the prehistoric animals, cutely nicknamed "Wetasaurs", and the other creatures populating Skull Island. Headed by animation supervisors Christian Rivers and



Atsushi Sato, a fifty-five animator and Inverse Kinematic (IK) rigging crew worked on the mighty ape featuring a staggering 813 single muscles, 1,117 joints and 223 sliders for facial expressions captured with 105 motion-capture sensors. After Peter Jackson's animation approval, animation was carried out part key-framed, part motion-captured. Serkis acted alone or interacting with actress Naomi Watts as Ann Darrow in the blue-screen/green-screen soundstages. He wore a lycra body suit with metal arms extensions trying to mimic the real gorilla's physiology. Sometimes, he

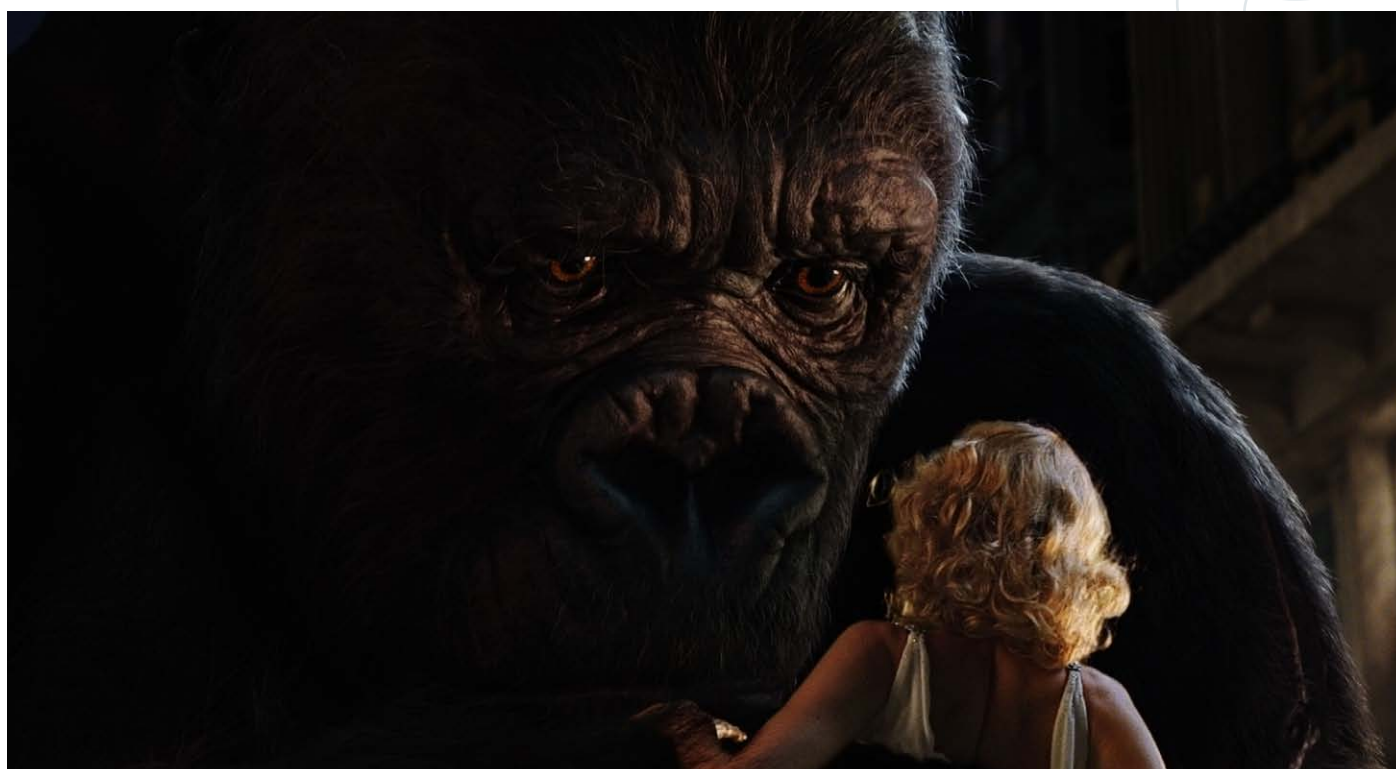






was on the top of a gantry at the same Kong height looking down at his sacrificial victim, sometimes he was seated on the ground with a tiny microphone near his mouth. This because he needed an amplifier for his screams, "grunts" and voice performances as a gorilla. Andy's Facial motion-capture data was very useful for animating the digital Kong in the eye area and Serkis, who is an expert mountain climber, performed dynamic and dangerous stunts to be transferred to the virtual gorilla, for instance When Kong jumps from a tree to another.

Weta Digital's modern version of 'King Kong' began with conceptual artworks prepared by Weta Workshop artists and a yak fur covered maquette. Every single hair was dark and often blood covered and was a Pixar's RenderMan 'curve'. A proprietary digital tool allowed the fur to grow directly from Kong's body texture maps, meanwhile specific deformer could bend it as required. It wasn't a single all black fur but a complex layer composed





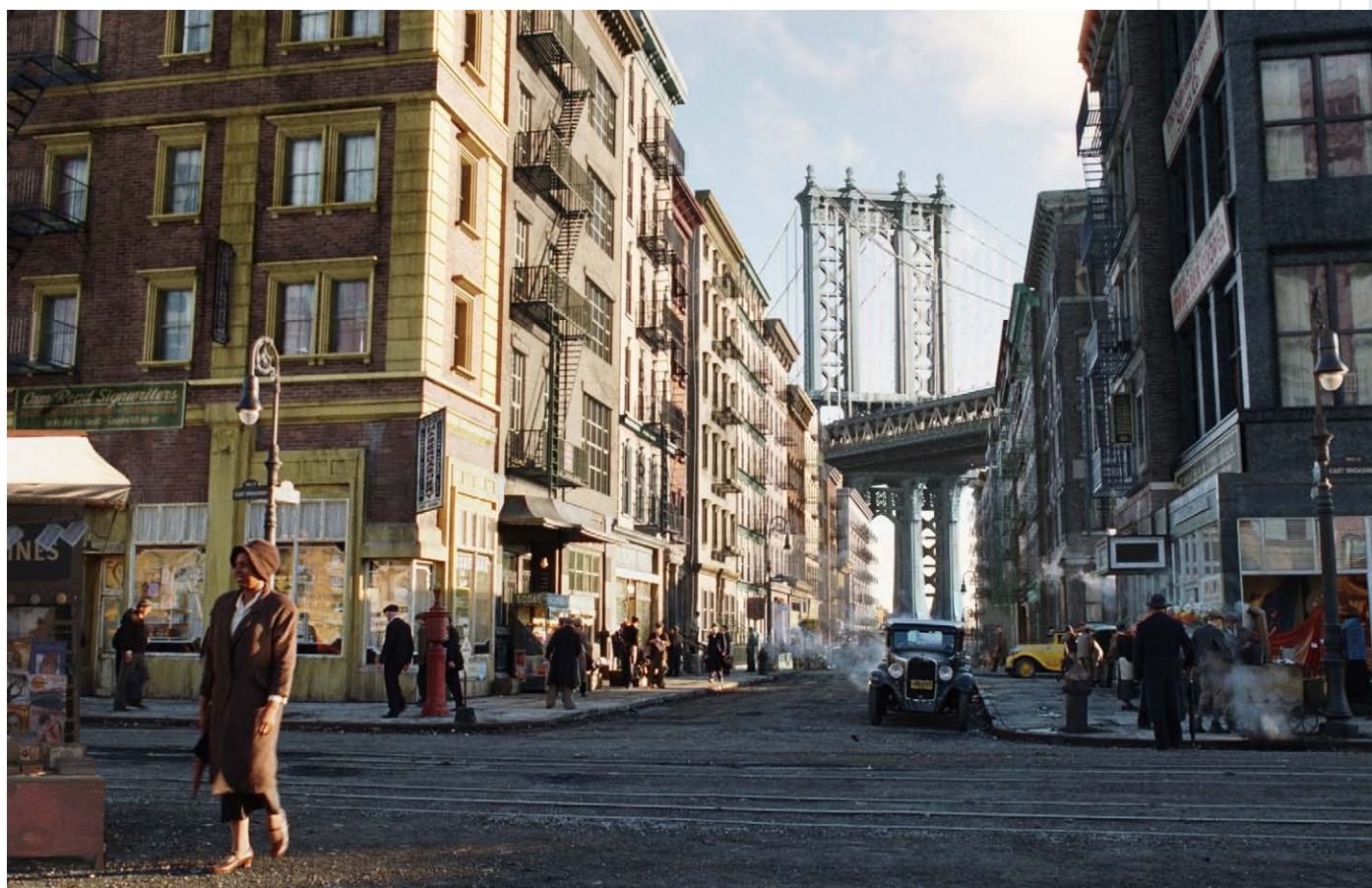
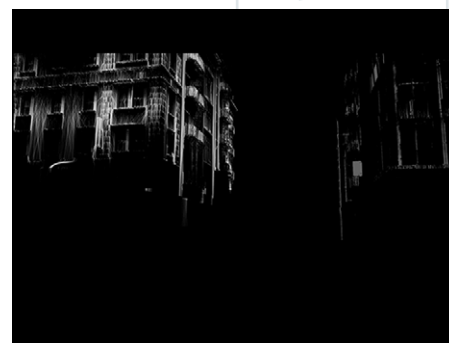
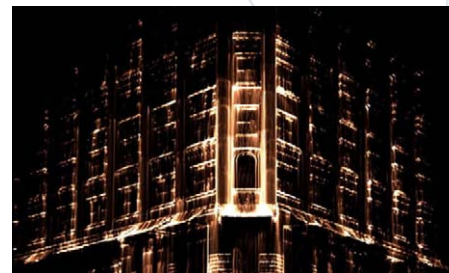
of almost 4,000,000 filaments interacting with surrounding environments. For example, several shaders controlled fur light reflection comprising Skull Island habitat, New York city lights at night and Empire State Building glass reflections during early morning. When Kong pursued S.S. Venture ship crew members aboard the lifeboat, the fur presented a wet look caused by light interaction with water splashed on Kong.



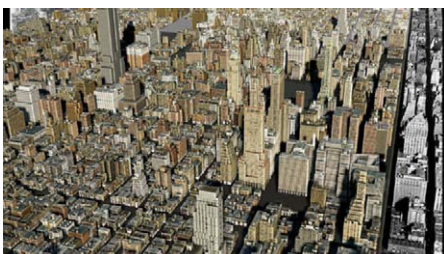
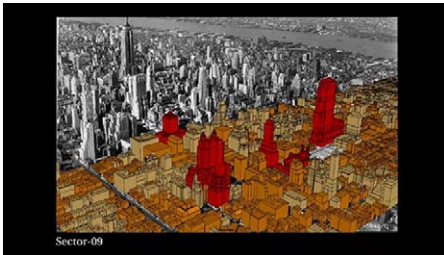
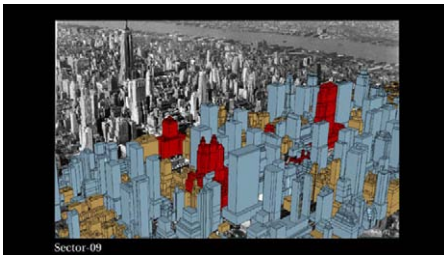


As the movie builds up to the Final famous showdown on top of the empire state building, Kong is forced to "join" showbusiness in 1933 New York City, he becomes angry because of photographers flashes. breaks the metal chains around his legs and runs away seeking out the beautiful Ann Darrow. Once found her, Kong climbs the Empire State Building and waits here with Ann. For these shots, Naomi Watts was photographed in front of a green-screen tied in Kong's hand. The "hand" was two green-screen fingers with red markers only, then digital compositors composited actress with both the CGI hand and Manhattan island digital replica, full of buildings lights and populated with Massive rendered cars and people. Peter Jackson brought his sweeping cinematic vision to the iconic story of the gigantic ape-monster captured in the wild and brought to civilization where he meets his tragic fate. Before that however,

U.S. Navy observation and attack warplanes Curtiss Model 49 O2C-1 Helldivers take off from a near airfield and set course to New York to open fire against the Gorilla. Because Helldiver biplanes weren't available in flying condition, the artistic, practical effects and construction crew members built two 1/1 full scale precise replicas for blue-screen shots, with actors playing pilot and observer/air gunner seated in real scale open cockpit. Physical effects technicians duplicated high altitude flying conditions by directing air streams against the plane fuselage mock-up. Efforts made to achieve realism comprised of having all wings vibrating and fuselage motion disturbed by turbulence. For long distance shots, attack warplanes were replaced with digital replicas modelled and animated in 3D, all of them with virtual aircrews and working ailerons and rudder. Strafing fire from planes guns was also animated. Kong manages to

















destroy three biplanes before falling down from the Empire State Building, digital models of the airplanes were built to be broken in predictable sections for this purpose.

The final effort made by Weta Digital for Kong regarded color grading. Since light and color are the magic ingredients that tie the screen-story together, digital colorists molded the color timing and lighting to create a stylized look for this classic film 2005 remake or even change the time of day during which the story takes place. They used discreet lustre color grading system as high-performance solution for interactive grading and look creation.



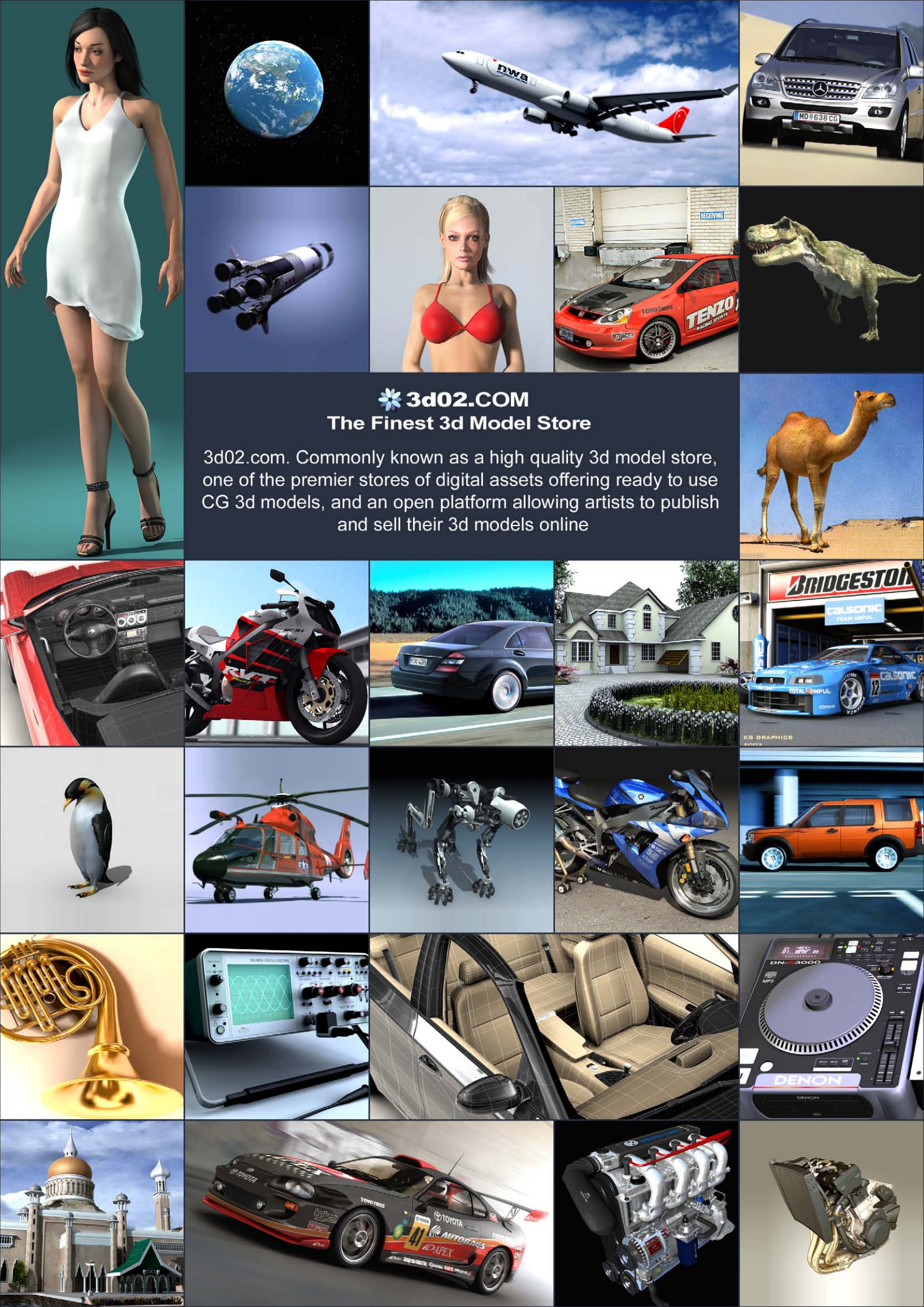




Despite a remarkable marketing campaign and 207 million dollars production budget, the last film from director Peter Jackson wasn't the worldwide box office smash hit expected. The movie did however ultimately gross around 600 million dollars at the box office, this too was also less than estimated. The movie earned about 600 million dollars but far less than expected. For these reasons, the most modern and spectacular King Kong was "huge" but not mighty....but will it be the last we see of the Giant ape?

Article by  
**PIERFILIPPO SIENA**





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Tortured Souls - BirdHouse - xxeb 2006 - www.publink.fr



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# JOHN CARTER

Johnny Pham

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# MAXON





# LOW POLY CHARACTER MODELLING

## PART 1

In this chapter we will tackle painting a texture for a low-poly character designed for use in a real time game environment. In this instance I have designed a character based upon a desert nomad who will be only partially clothed and wear some armour elements so we can cover painting both clothing and human skin as well as metal.





## LOW POLY CHARACTER PART ONE

In this chapter we will tackle painting a texture for a low-poly character designed for use in a real time game environment. In this instance I have designed a character based upon a desert nomad who will be only partially clothed and wear some armour elements so we can cover painting both clothing and human skin as well as metal. As with painting the head texture in chapter eight, the model will require mapping co-ordinates in order for us to begin our texturing. The principals of unwrapping our model are similar to the previous chapter except that in this case the entire model shall be planar mapped in sections and then arranged on a single template with the intention of wasting as little texture space as possible. Once we have decided on the size of our texture we need to consider how to go about mapping our model and where we want to create our seams. As we cannot map the model in its entirety it is a good idea to have a look at our character and try to establish where there are natural seams. By this I mean edges where a material or object ends and where another begins, for example where a shirt is tucked into a pair of trousers or some form of headwear that only covers the top half of a head. In the case of our nomad there are a number of natural seams that will help us organise sections of the geometry into separately mapped areas (image 1: Seamlines). The red lines represent



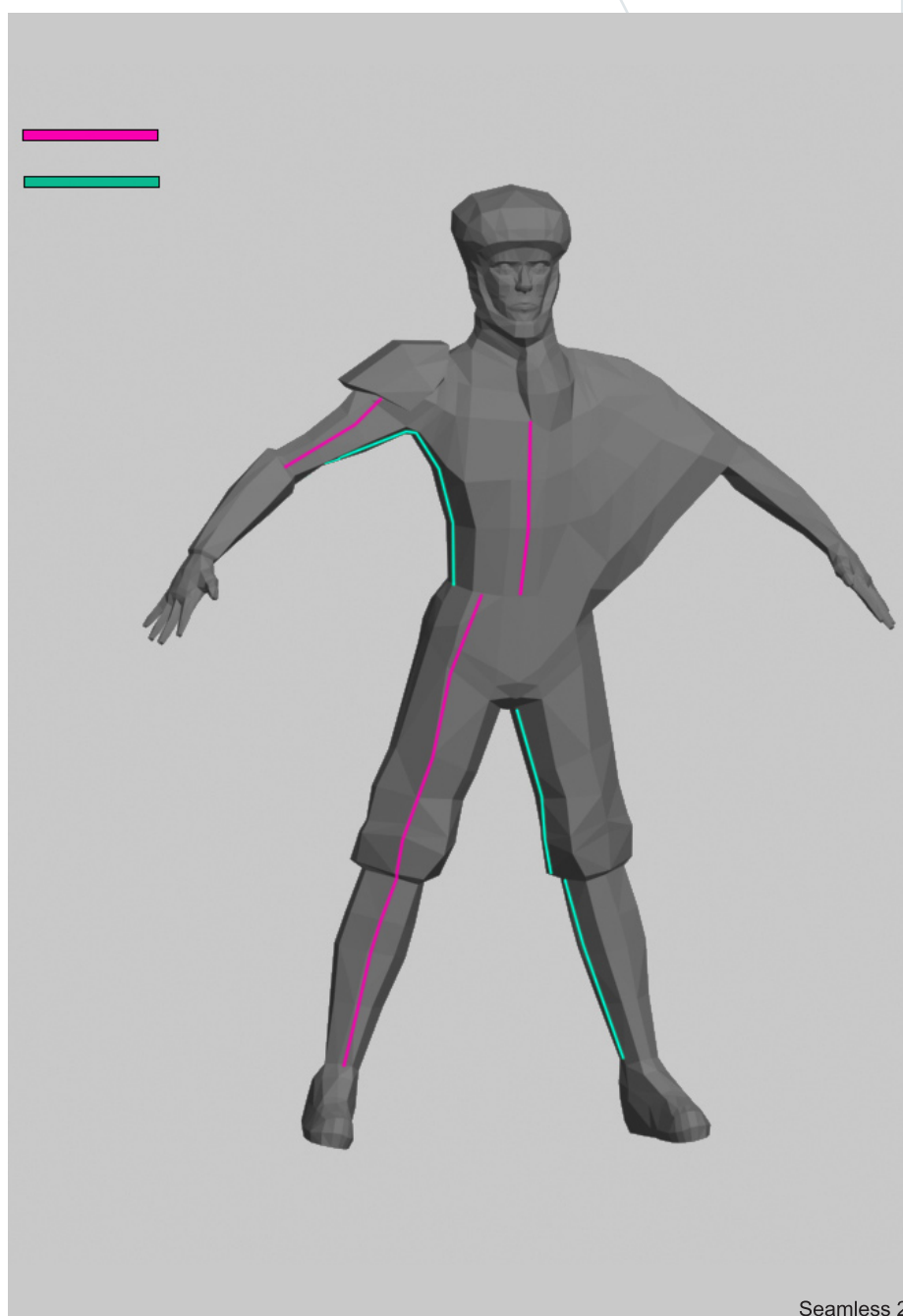
Seamless



boundaries between areas that could be split up without causing too much of a headache to the texturing process. The reason for carefully considering this is because we wish to avoid any visible seams across the geometry and the more fragmented our mesh the more we need to worry about perfectly matching edges. This is why natural edges are best utilised so we can minimise on these worries and exploit the problem to our best advantage. It follows then that if we can unwrap the model into as large areas as possible and separate the mesh along obvious seams then we should pave the way for a much smoother painting process later on. This technique also ensures that we have clean and crisp edges where we need them and prevents any nasty distortion which is a common problem on textures of a lower resolution. The trousers can therefore be split from the body and the armour pieces from the left arm as well as other elements with a red outline like the headwear and right forearm. Once we have determined where we want our seam lines we can begin mapping our character section by section and arranging all the pieces together before stitching parts together to form our final template. Again we can use a checker map to help in this process and by keeping a similar scale across the model we can maintain a consistent resolution in the final texture. This is generally a good rule of thumb but it is worth noting that this is not a strict rule and often proves to be short of an ideal solution. I've found in the past that when texturing vehicles for example it has been worth affording more texture space to details such as headlights and radiator grills which are often focal points on the models. This really outlines the key thing to remember here which is to bear in mind which parts of our model form an area of focus and whether it is worth allowing them more space on the template as a result. In the case of our nomad I decided to give the chest area and particularly

the face a little more texture space as they will show the most detail. What is also of relevance here is the use of duplicating geometry after it is mapped as any components that are copied will share the same co-ordinates thus saving on texture space and as a consequence giving us more resolution to work with which will improve quality. We can map the one hand and leg and even half of the face which will inevitably mean less painting and more room

for each section on the template. One more thing to consider before we begin texturing is where we shall have seams on the pieces once they have been mapped. For example when we consider the area that composes of the torso we can in fact have the seam at any point on its surface but it is always sensible to place it in the most inconspicuous place (Image 2: Seamlines 2). In the case of our character it would be best suited down the side of the



Seamless 2



body as seen by the green line as opposed to the pink line which would prove the most problematic when trying to paint any detail and match two edges. The same applies to the limbs and having a seam along the inner faces of the arm and leg is far less obvious and aids in the painting of a more coherent texture across the most apparent areas of the geometry.

Assuming we have now mapped and unwrapped our character we are at a stage where we can see how our final template is divided up across our geometry and which areas share the same co-ordinates as seen by matching colours. (Image 3: Mapping Sections). We can now export our wireframe and begin working on our texture by first



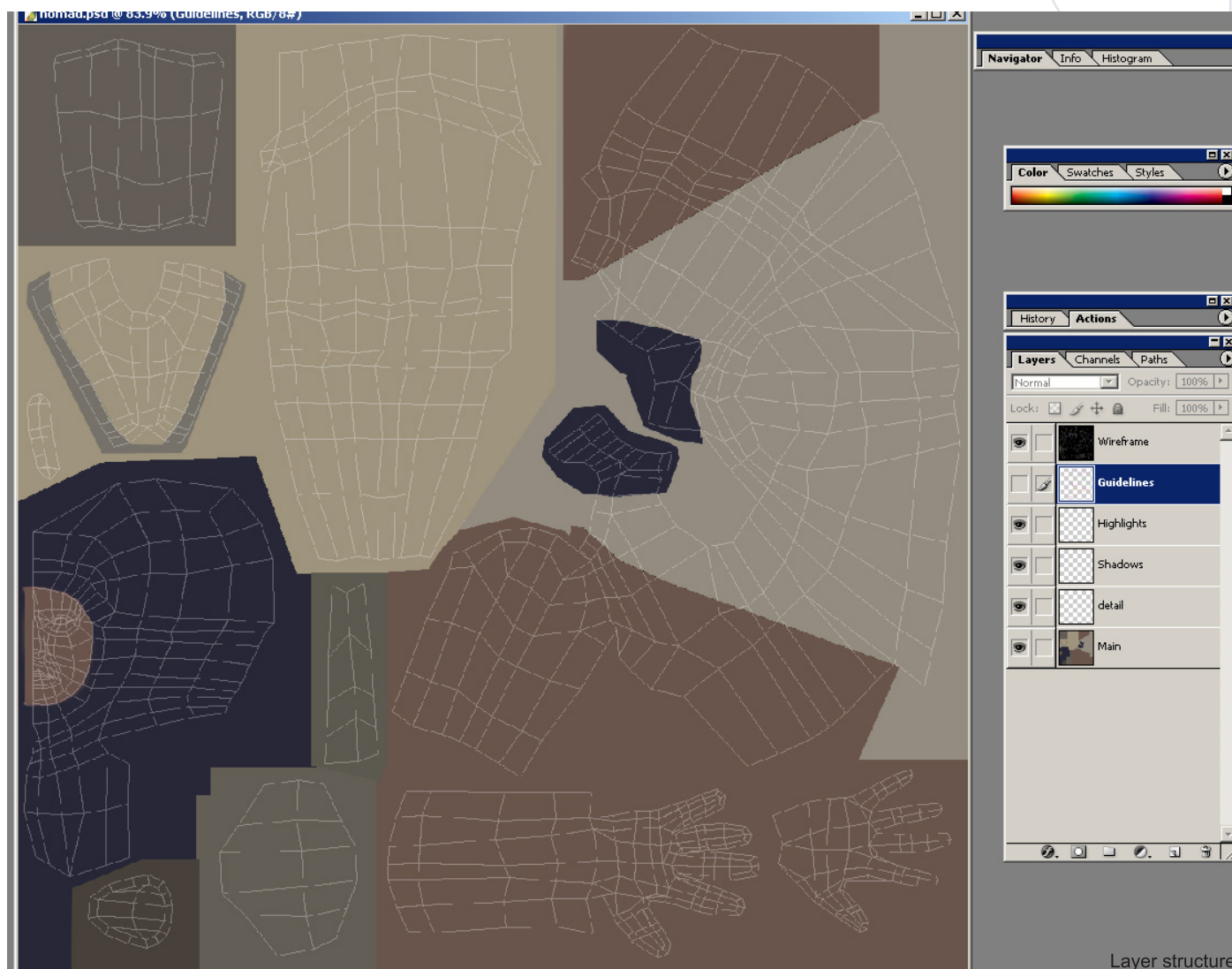
Mapping Sections



Base Colour

blocking in the main areas of colour and deciding where the clothing will fall across the torso. (Image 4: Base Colour) This is also a good initial gauge of how well the model has been mapped and hopefully what we see on the texture is what we will see on our character. You can see that I have placed a shawl across only one shoulder so that I can have an area of the torso to paint. Usually at this stage I set up my layer basic structure in photoshop so that I can keep the various stages of painting intact and this also enables making changes further into the process far easier. I try to organise my PSD files into essential layers early on to avoid the file





Layer structure

becoming over complicated as more detail is added. ( See above ). As we can see in the diagram I have named the first layer "Main" and this composes of our main areas of colour that will describe our characters appearance. The next layer I usually add is one that I name "Detail" and this will comprise of additional aspects of our nomads state of dress that do not form the bulk areas of his clothing such as straps, utility belts, eyes and harnesses etc. The next two layers are the ones that I consider to perhaps contribute the most important aspects of our texture and those are "Shadows" and "Highlights" and are the two layers that should logically come above the previous two. I usually set the shadow layer mode to Multiply so that

we can always see the underlying layers and the highlights to Soft Light or Overlay depending on the texture being done. These are really the two layers that flesh out the form on our model and give it a sense of weight and help create the illusion depth where there is none. With all low-poly characters the texturing is vital to describing details in areas where there is none and is used in place of geometry to enhance a characters design and quality. The last two layers are in no way part of the final texture but are no less vital and are integral to the process. The top one is the exported wirefarme which represents the mapping co-ordinates of our model and is set to Screen mode so that I can see the underlying layers and lastly is our "Guidelines" layer which

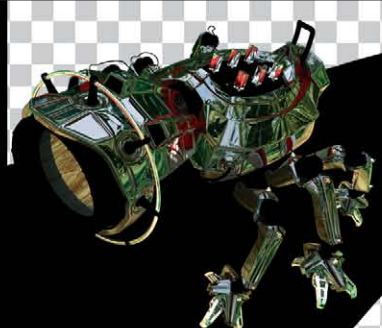
I use to mark out areas that help me see where to place details such as shadows and highlights and check whether details that bridge seams match up. These then form the essential break down of our texture and help organise our painting process into some sort of order. There will inevitably be additional layers that may be needed down the line in order to add more levels of detail without ruining anything that has already been done but ultimately they may be flattened and possibly included in the structure already set up.

Tutorial By :  
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COLOR



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DEPTH



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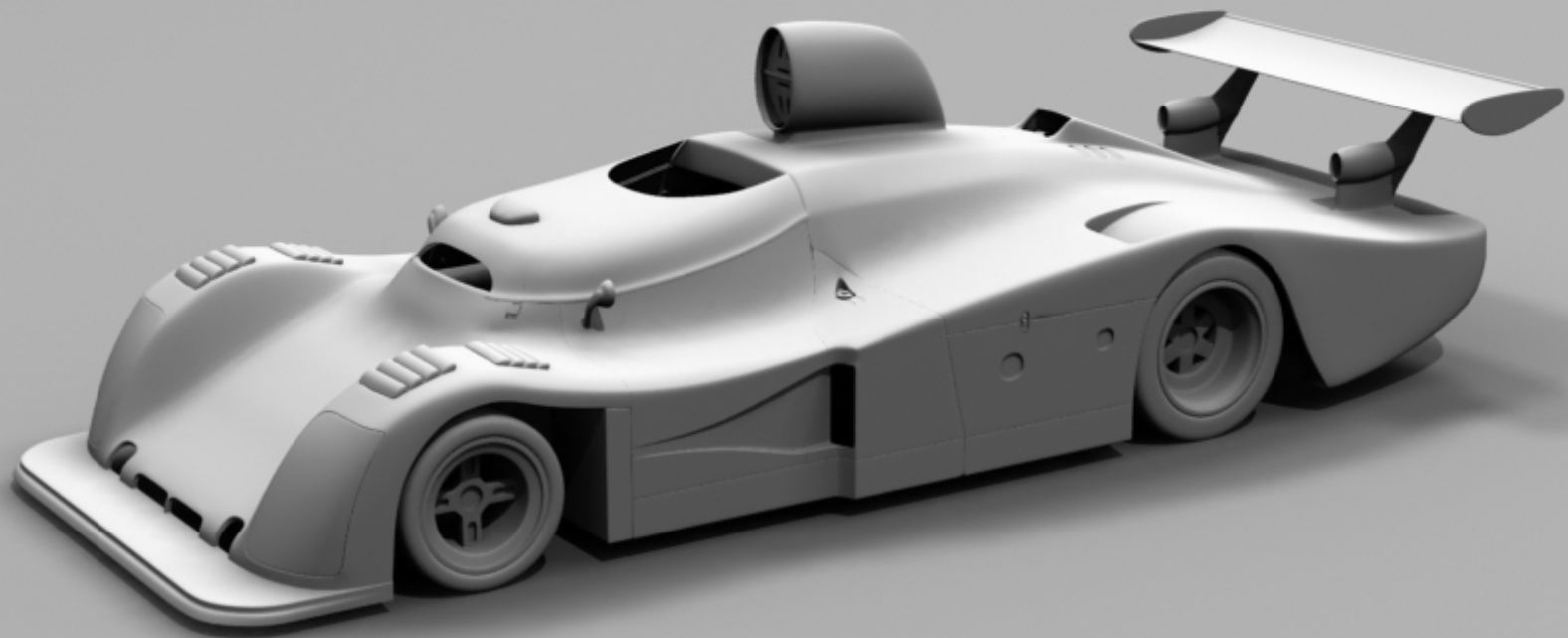
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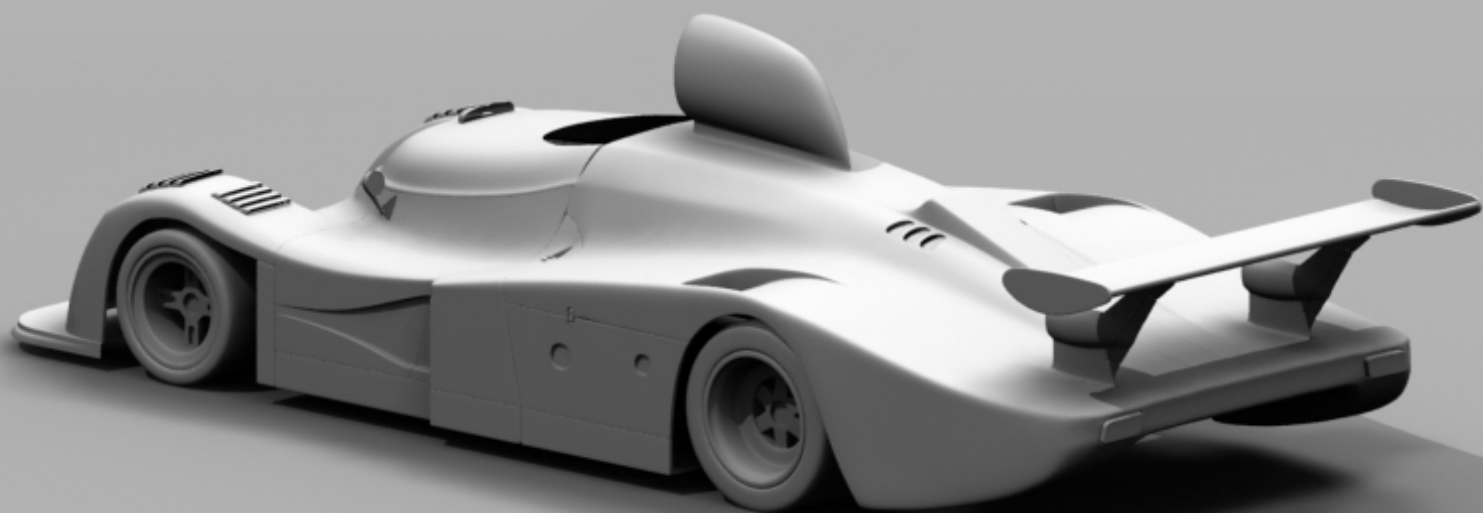
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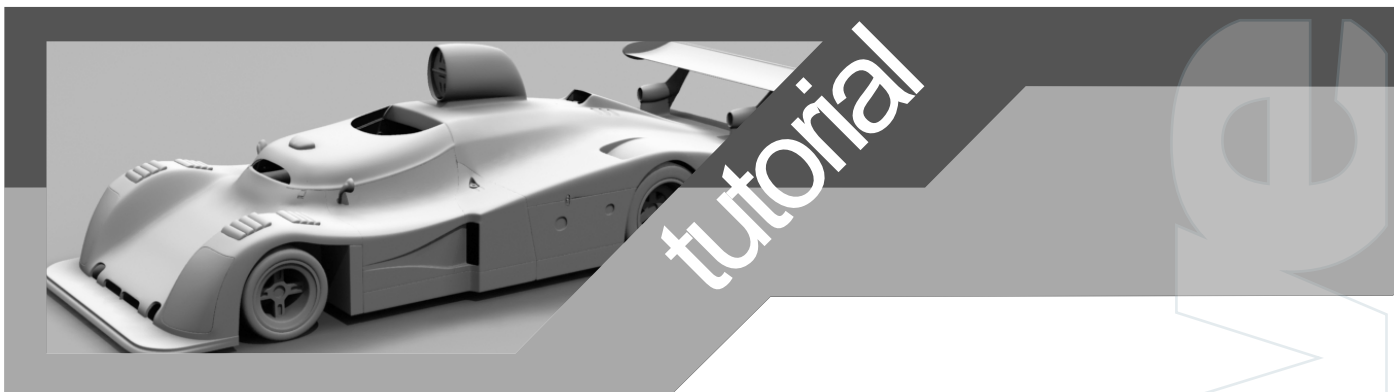




modelling an  
**Alpine A443**  
by d'Ettorre Olivier-Thomas  
part two







## PART TWO:

### MEDIAN AIR VENT

DIFFICULTY - 2

IMPORTANCE - 4

And we continue on this air vent using edge loops and remember to keep in mind the smoothing. I found it on the previous air vent. Don't worry about the tripatches because after applying symmetry, I'll edit the car in poly mode, and delete the median edge (fig 1 - 4).

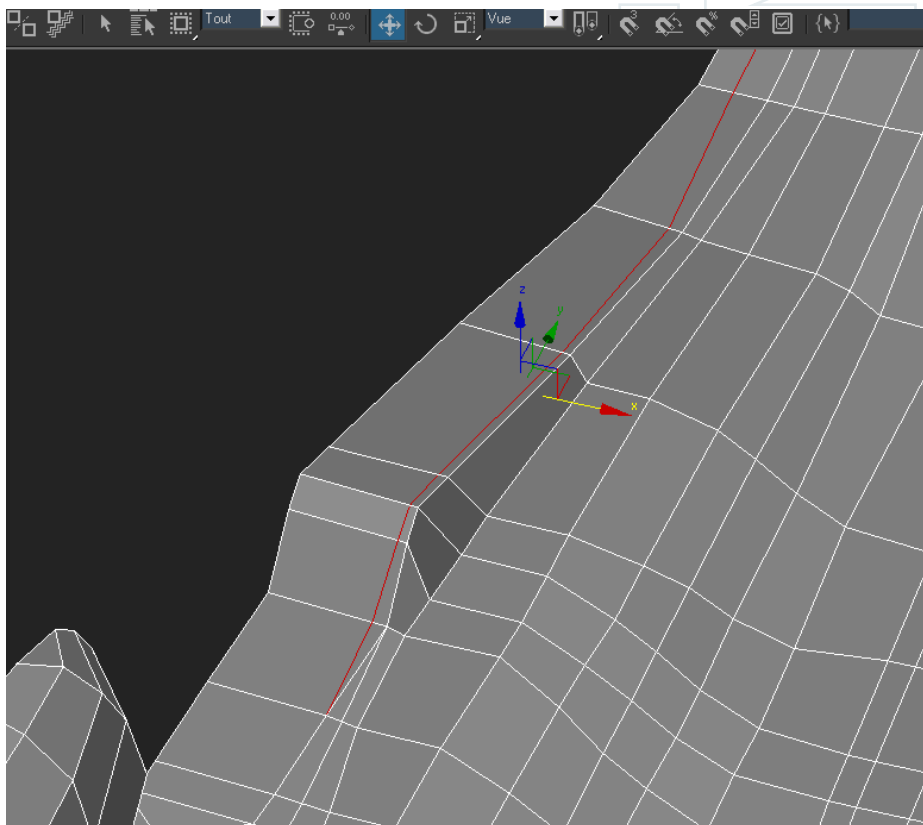


Fig 1

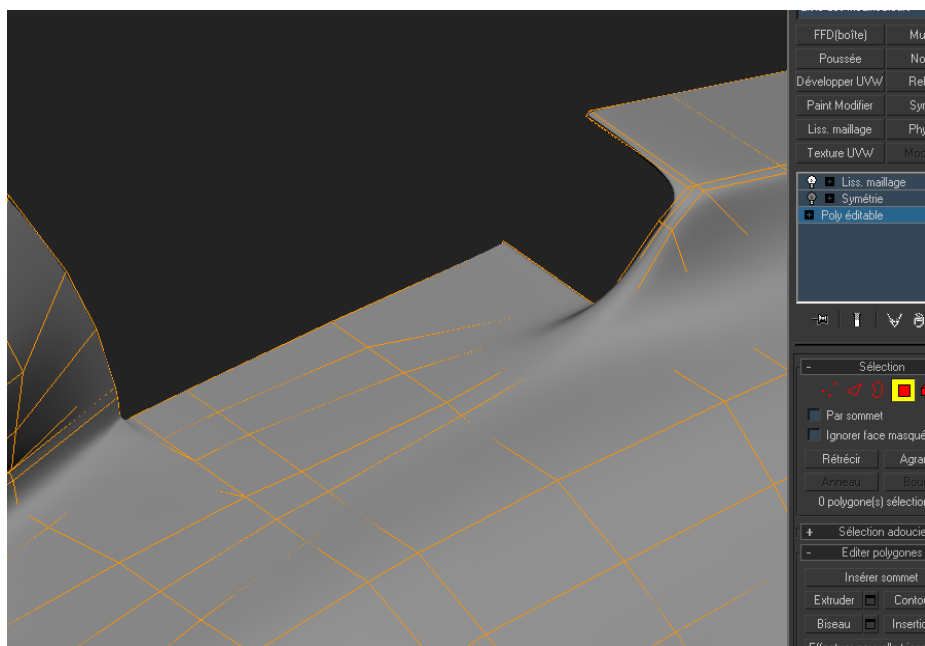


Fig 2

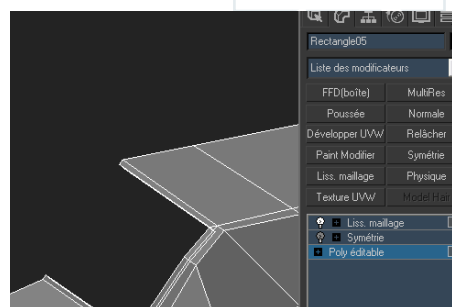


Fig 3

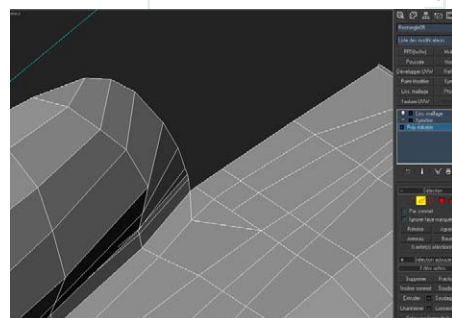


Fig 4



Next let's go and detach all pieces - Just select the polygons (fig 5), detach (fig 6), and extrude the border edge (fig 7). Make a chamfer (fig 8), and check using meshsmooth (fig 9 & 10). And eventually you should end up with something like this (fig 11).

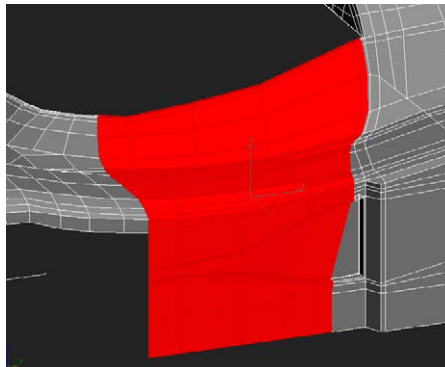


Fig 5

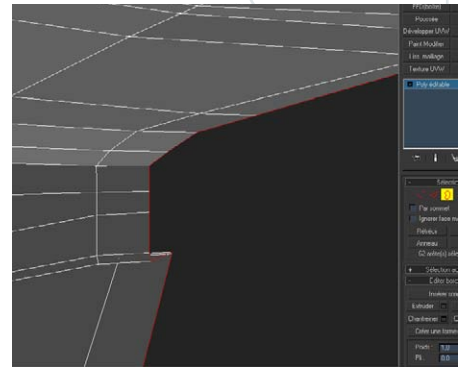


Fig 6

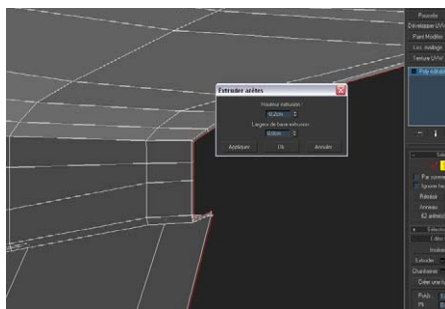


Fig 7

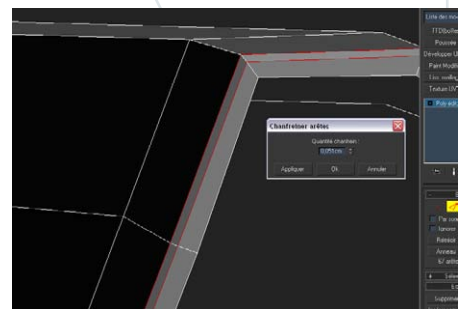


Fig 8

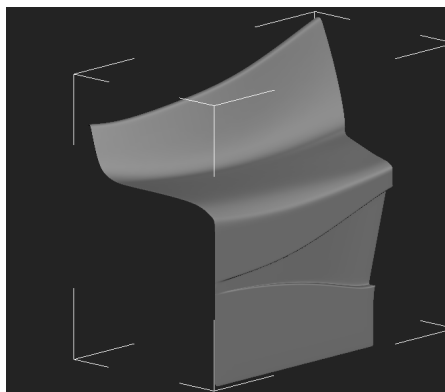


Fig 9

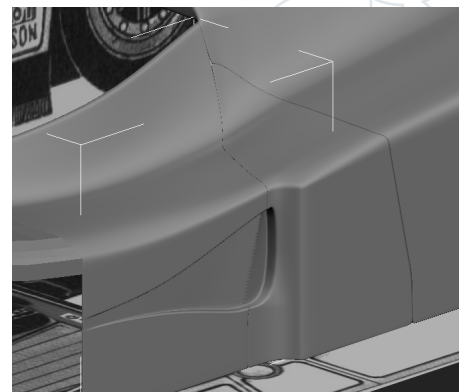


Fig 10

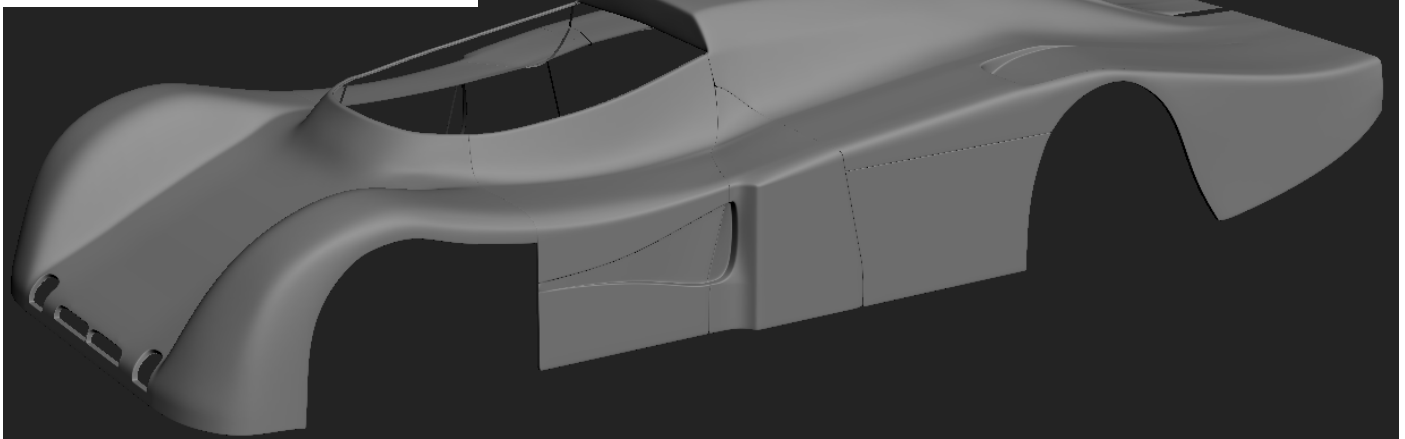
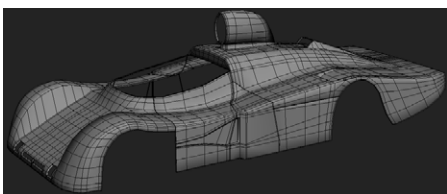


Fig 11



## REAR WING

DIFFICULTY - 3

IMPORTANCE - 5

Like the top air vent, make the rear wing using similar principals and for the side part just use a simple extrusion. Note I have contoured the center (fig 12 - 17) , and when I apply meshsmooth it works really well (fig 18 & 19).

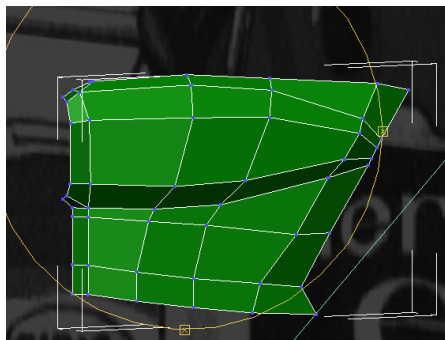


Fig 12

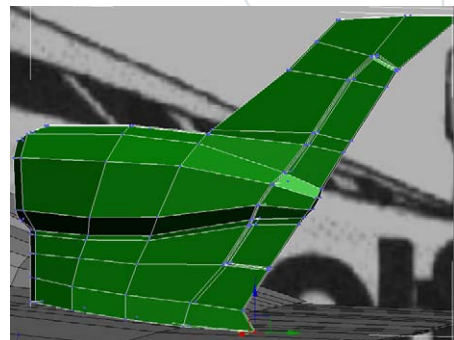


Fig 13

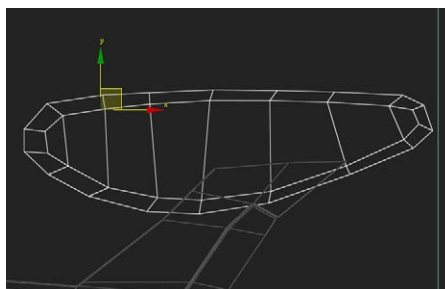


Fig 14

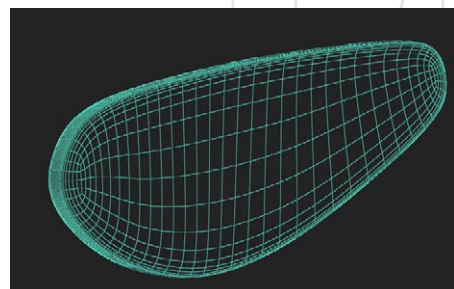


Fig 15

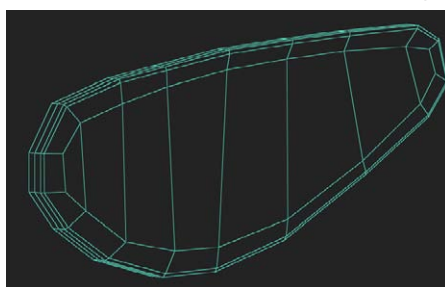


Fig 16

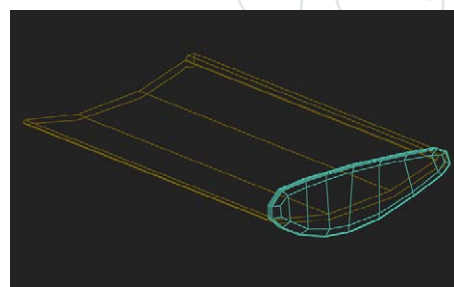


Fig 17

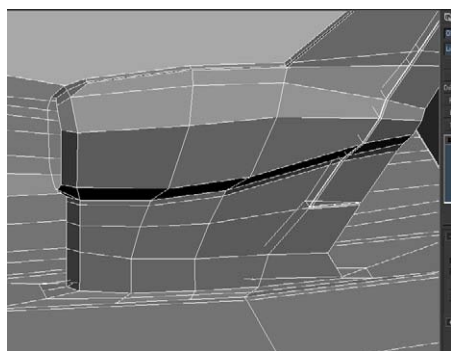


Fig 18

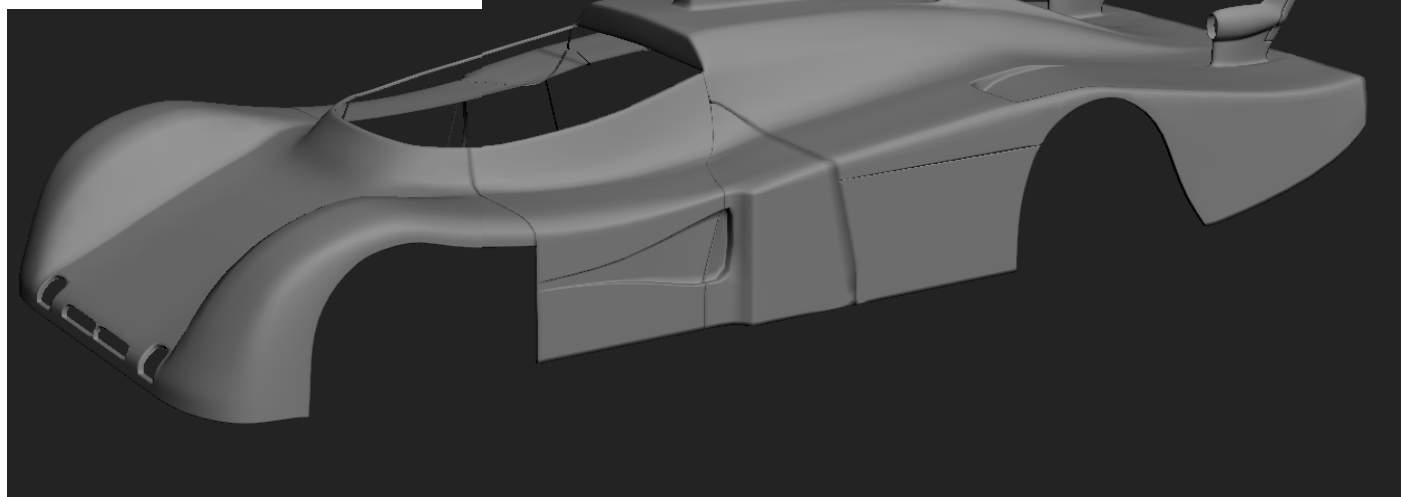


Fig 19



## HEADLIGHTS

DIFFICULTY - 5

IMPORTANCE - 5

Now for the glass headlight cover which I 'll have to remake because of the lack of reference on the web.

I create the vertices in positions that the blueprints describe and then detach to a clone, apply a negative extrusion and eventually apply a chamfer on the outer edge. Finally apply a meshsmooth (fig 20 - 24).

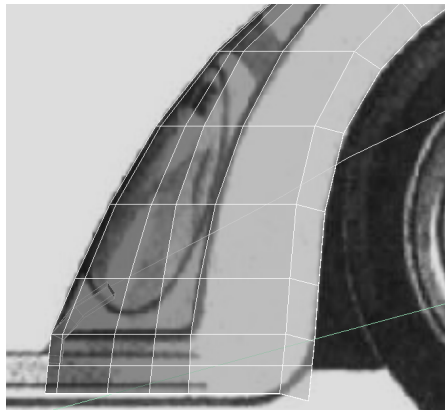


Fig 20

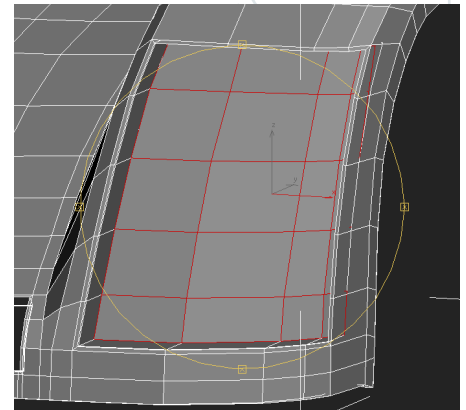


Fig 21

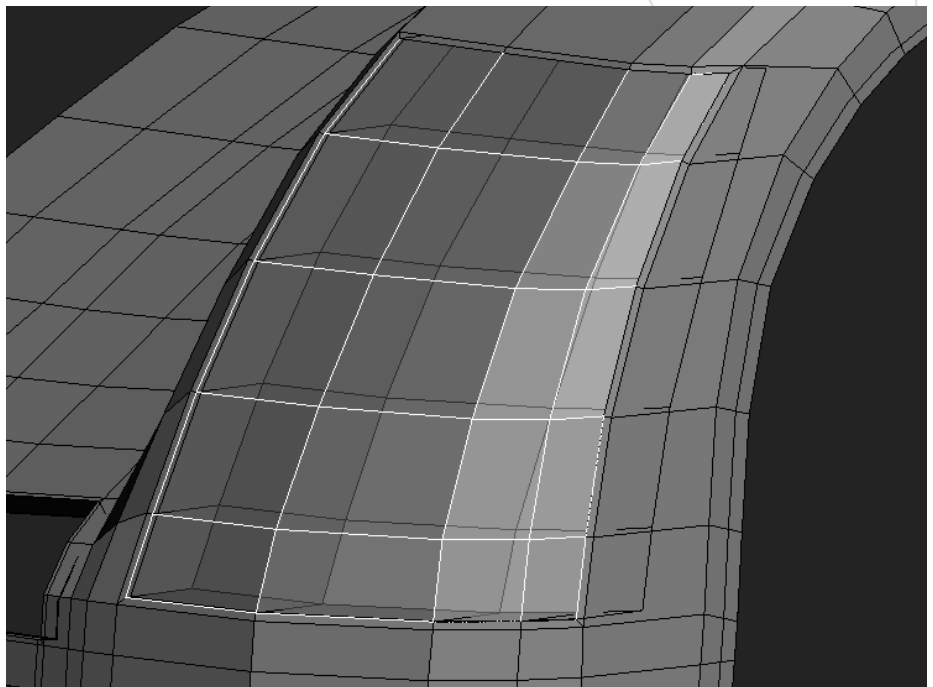


Fig 22

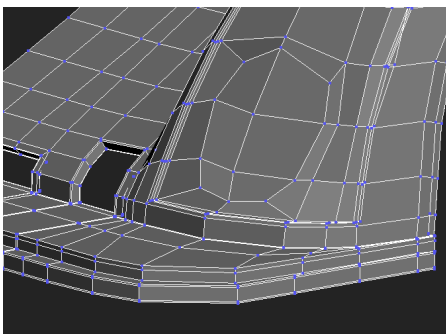


Fig 23

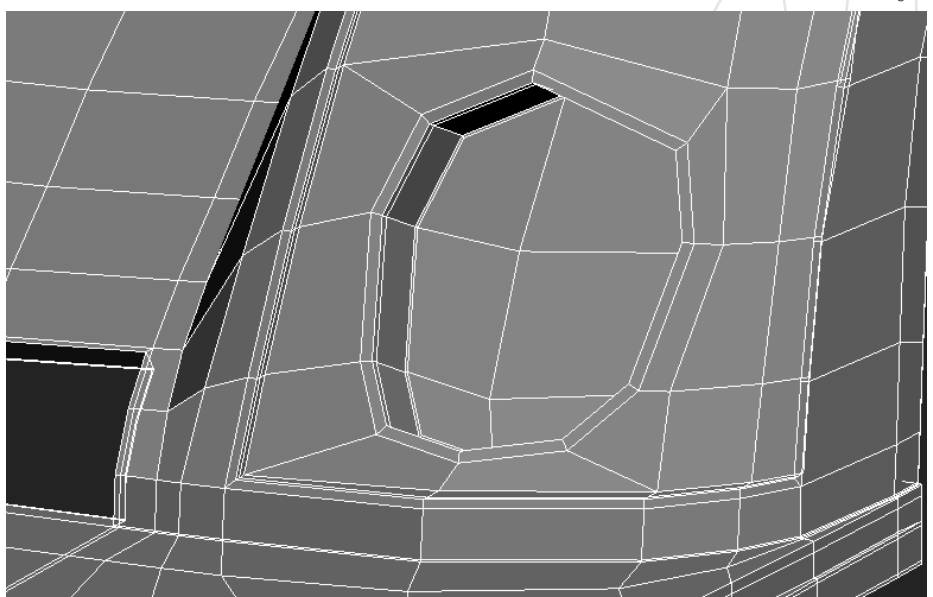


Fig 24



## TOP WHEEL

DIFFICULTY - 3

IMPORTANCE - 5

Again the same problem here - make some room on the mesh, detach, and then apply meshsmooth. Then re-edit in polymode using extrude, etc.... Please note the importance of the little edge I added in the first part of the tut, very helpful now (25 - 31).

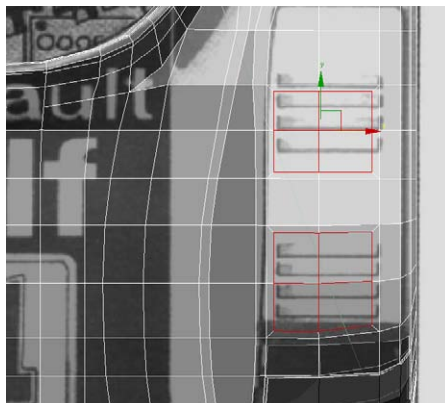


Fig 25

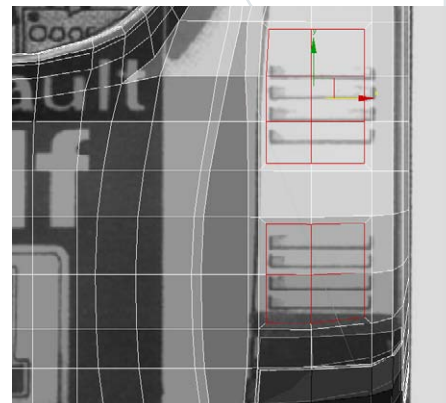


Fig 26

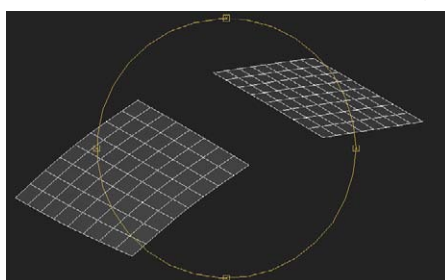


Fig 27

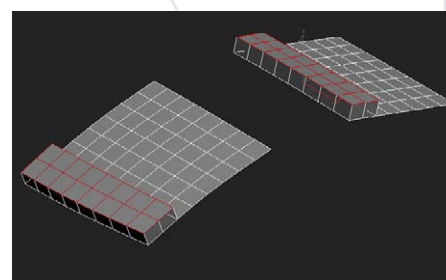


Fig 28

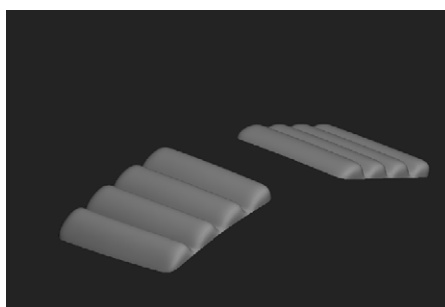


Fig 29

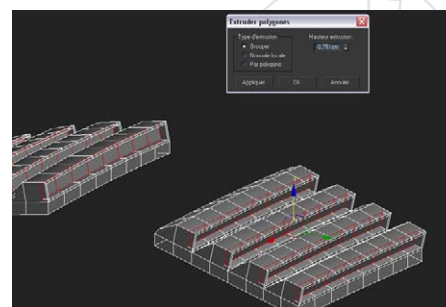


Fig 30

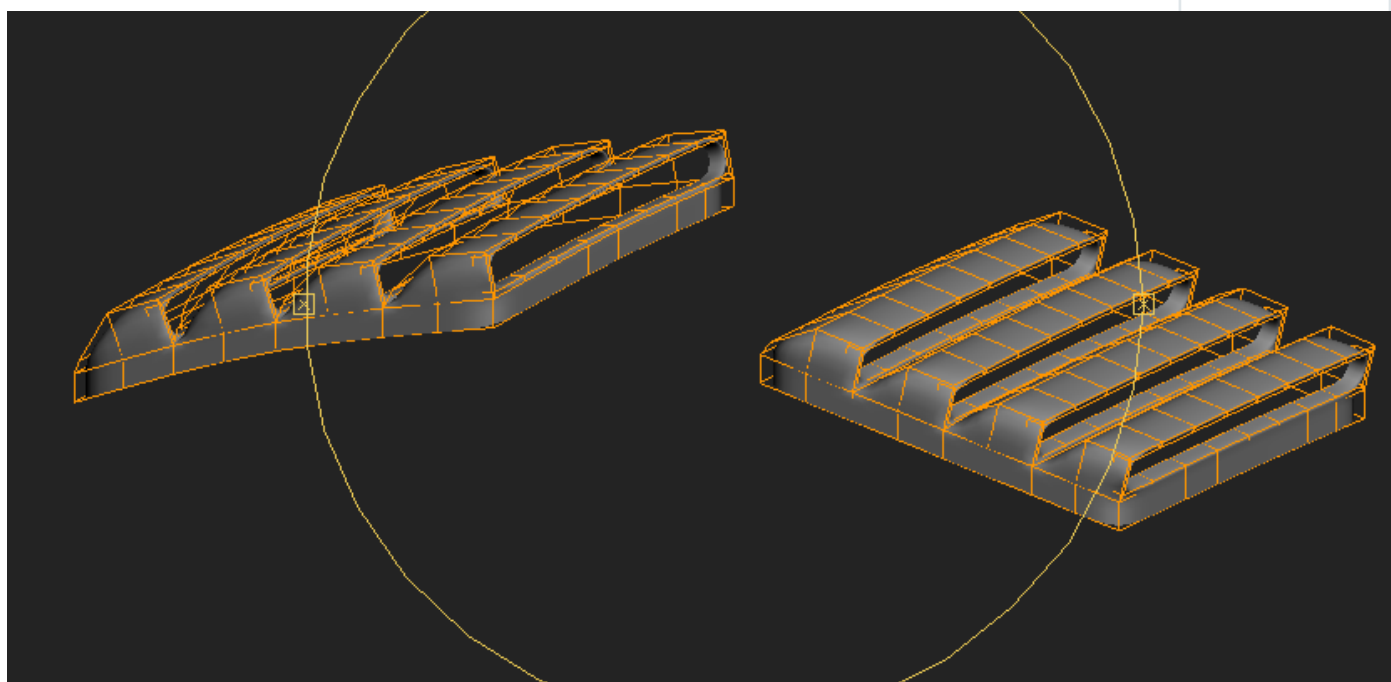


Fig 31



## FRONT PART

DIFFICULTY - 3

IMPORTANCE - 4

And now returning to the front part, which is the front wing and various air intakes. First I modified the first cut I did which was not good enough. I then made some extra cuts on some polys and then extrude them to the front. Apply meshsmooth to see the better angle !! Don't forget too to look on the side and adapt the mesh (32 - 40).

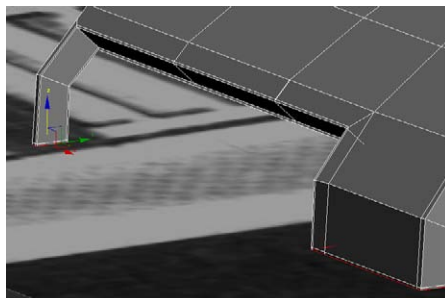


Fig 32

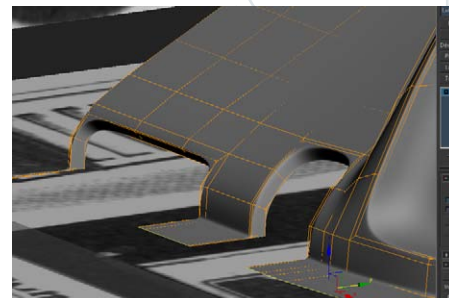


Fig 33

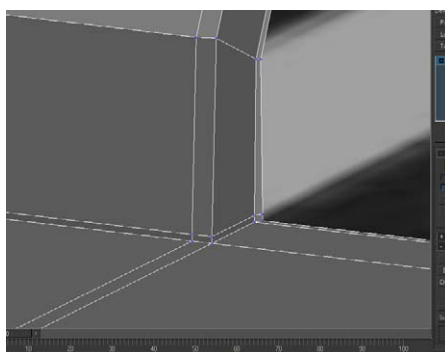


Fig 34

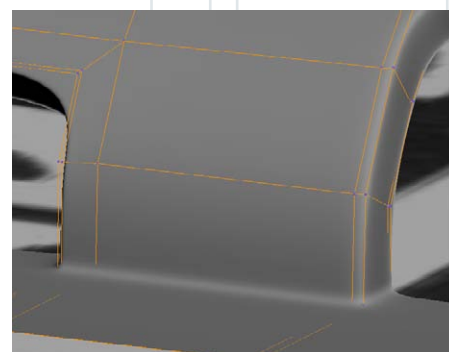


Fig 35

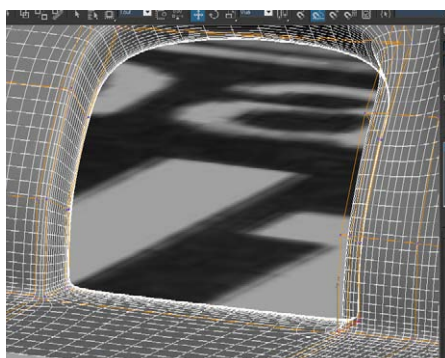


Fig 36

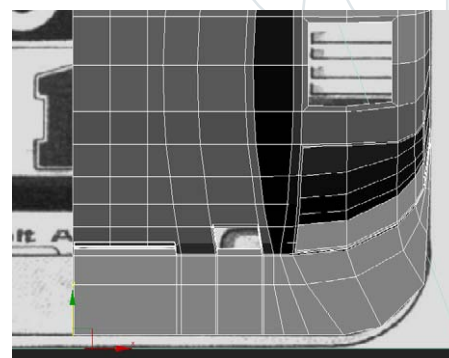


Fig 37

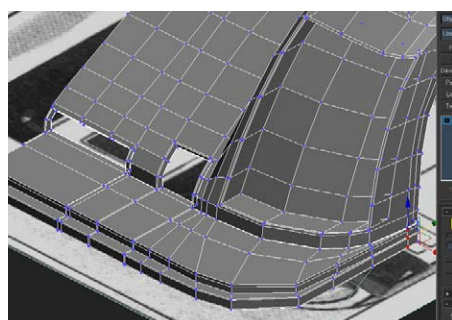


Fig 38

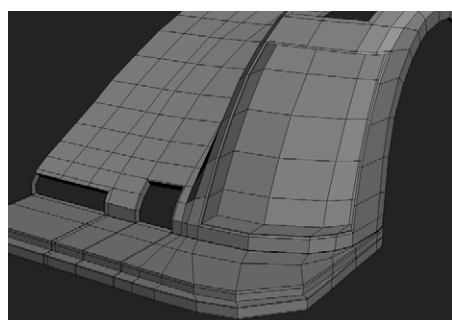


Fig 39

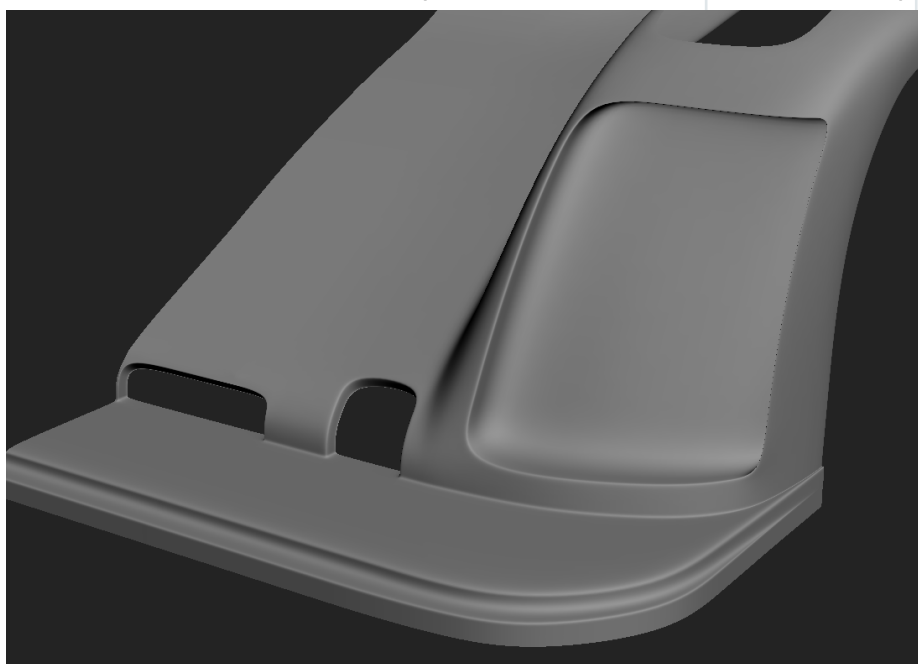
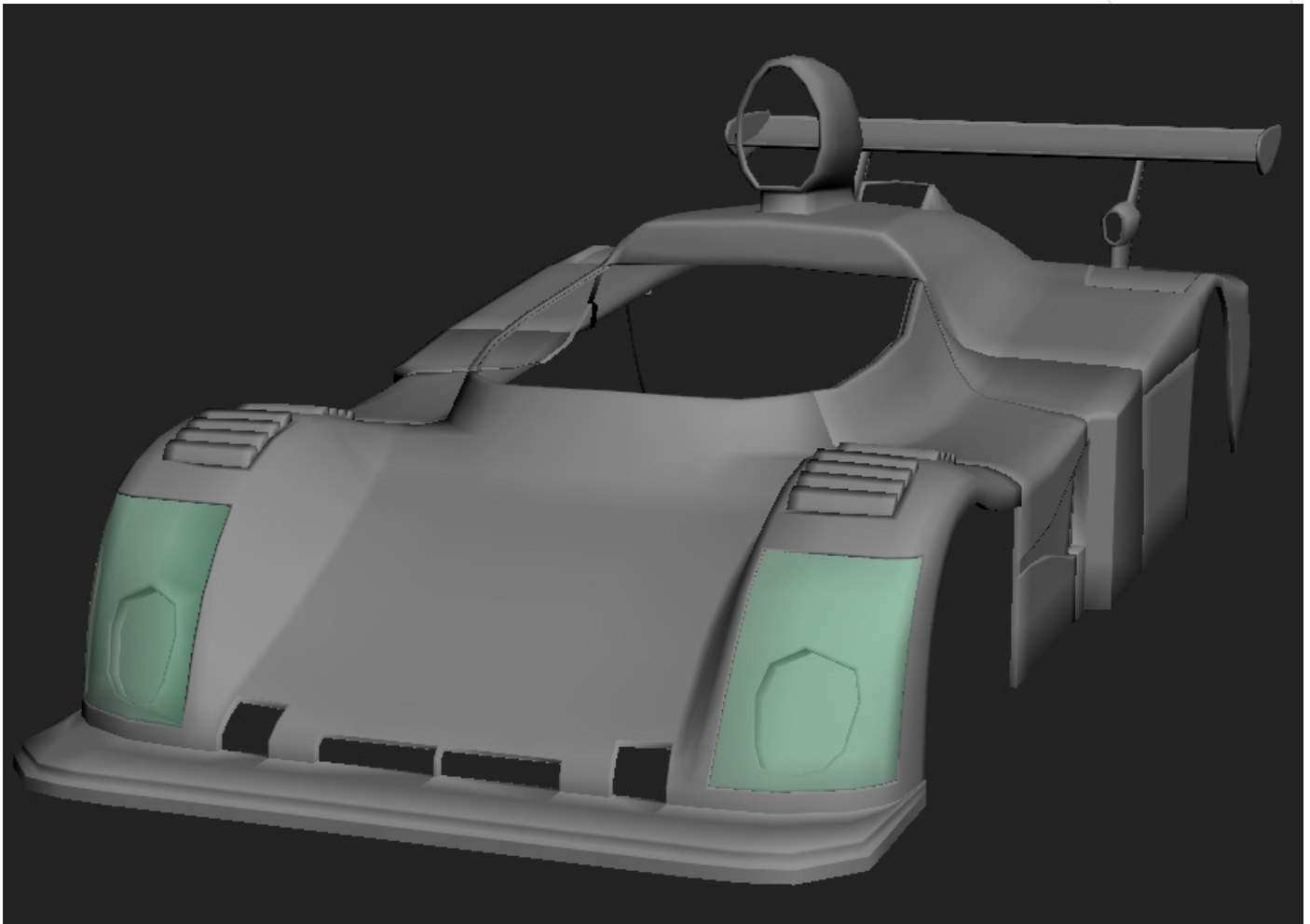


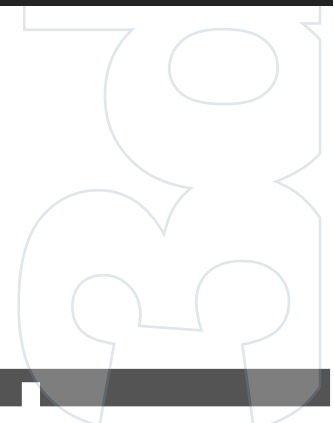
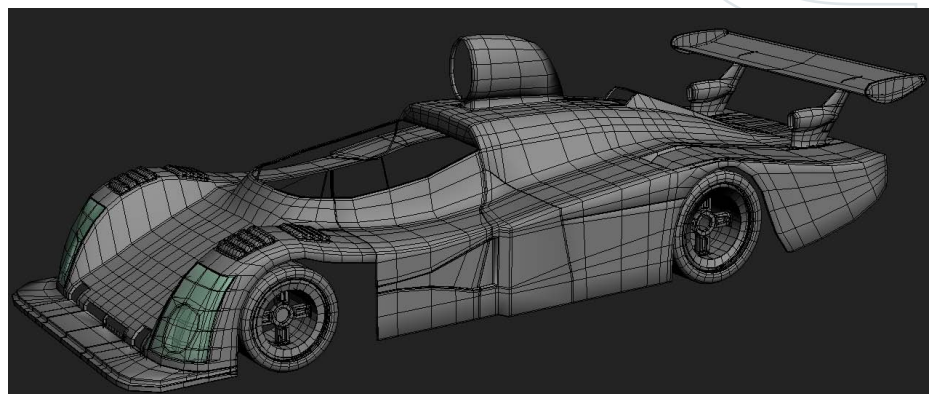
Fig 40





I finally arrive at this after some minor tweaks  
- the finished car :) There are still some parts  
like the wheel, and the bubble to be made :)  
(not always here during race)

Tutorial By :  
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# Rigging for Moosah and Chub

For this model I created a whole series of soft constraints, which can give the effect of secondary action, gravity, wind resistance, etc. These soft constraints will run realtime and can be used to create automated rigs.





## RIGGING FOR MOOSAH AND CHUB BY ADAM SCOTT

I knew rigging my Moosah and Chub model would be quite the project, but once I understood some of Softimage XSI's rigging features it went pretty smooth. For this model I created a whole series of soft constraints, which can give the effect of secondary action, gravity, wind resistance, etc. These soft constraints will run realtime and can be used to create automated rigs. With my model, I was able to animate the beast and have the rider and accessories all react believably to just the beast's movement (image 1)

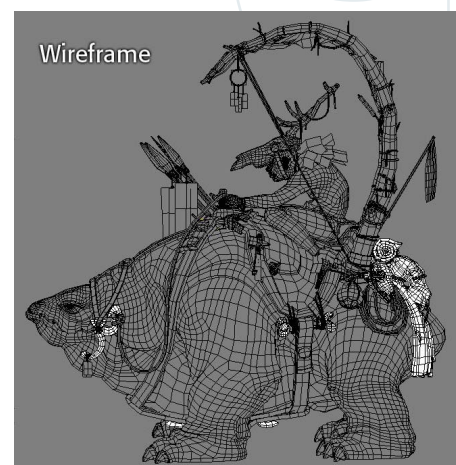
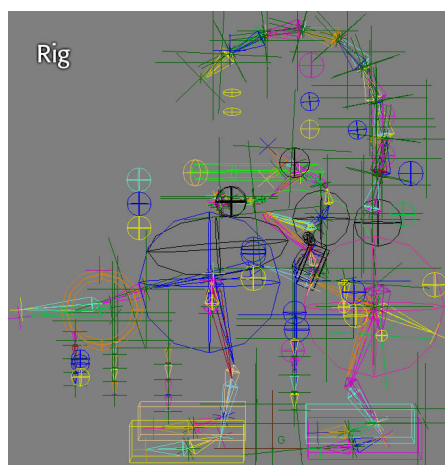
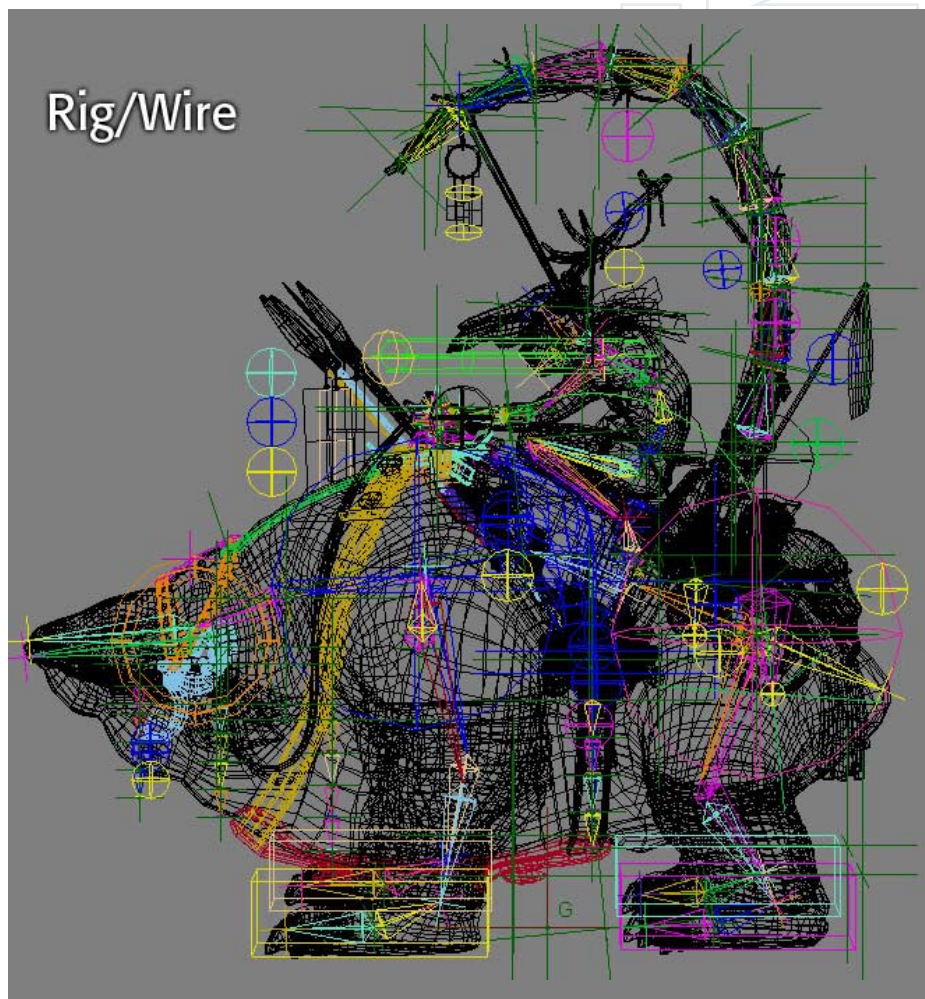


image 1



Looking at the entirety of the bone system might be a bit chaotic, but once I show the process for a single section it'll look a lot simpler. To start things off, you will need to check a couple options under the animation toolbar: Create - Skeleton. Make sure to check "SI|3D Skeleton Drawing" and "Align Root to First Bone When Drawing". The first option properly sets up the parenting for the bones that is needed for this technique (places the effector under the last drawn bone instead of the root). The second option just makes things visually cleaner (image 2).



image 2

Time for the construction of the soft constraint; choose "Draw 2D Chain" and create a single bone pointing downwards, then end picking (image 3).

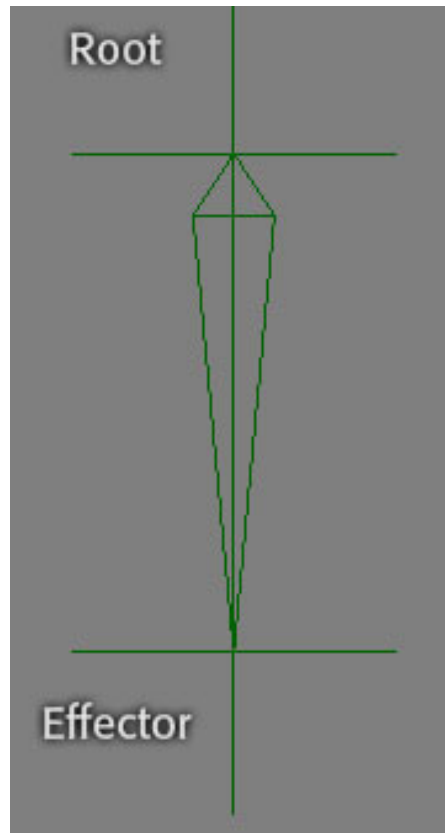


image 3

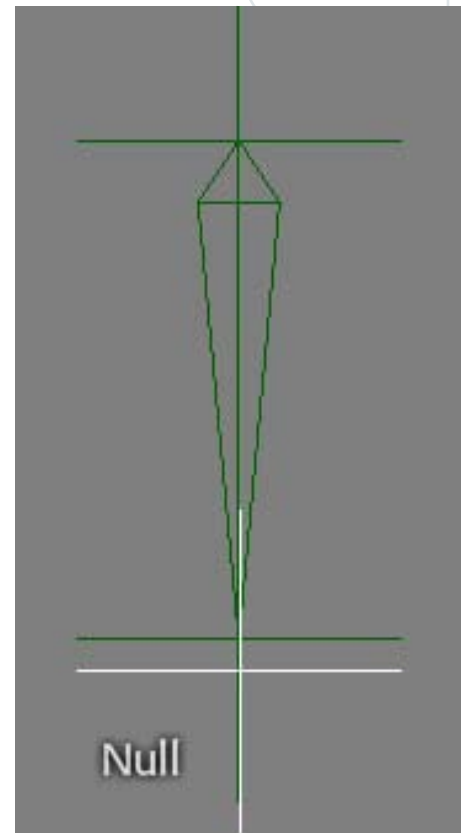


image 4

Create a null and place it just below the effector (image 4).

Make the null the child of the root (image 5).

Select the effector and constrain its position to the null (image 6).

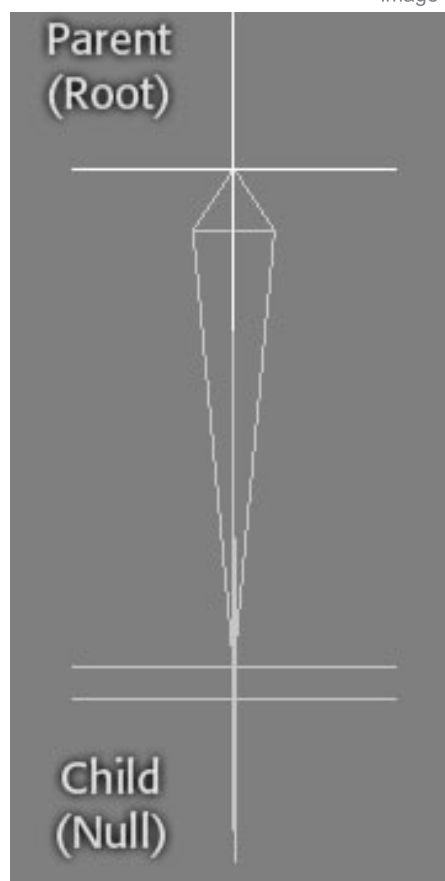


image 5

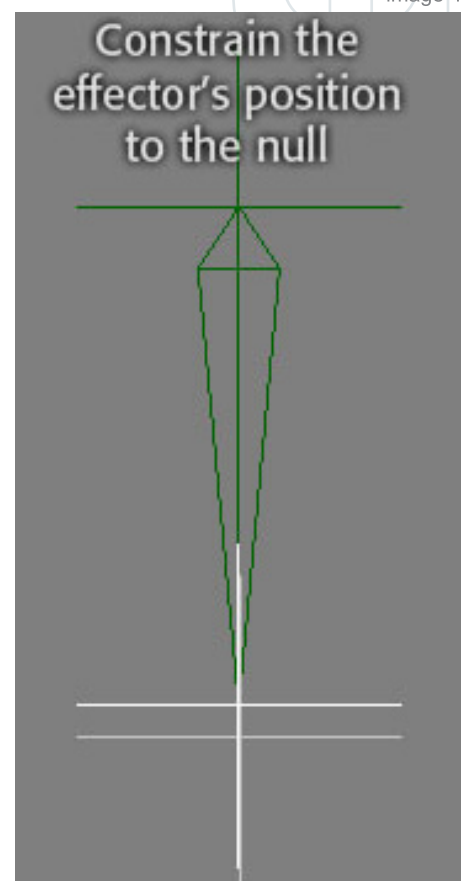


image 6



Under the position options window, lower the Blend Weight (the lower it is, the bone structure will be more flexible) (image 7).

In this same window, set the Coupling to soft, rather than hard (image 8).

Branch select the bone's root (by middle clicking), duplicate it, and bring the duplicate down so the duplicate root is between the effector and the null (image 9).

Now make the duplicate root the child of the original effector (image 10).

You can easily double the length of your chain by branch selecting the original root, duplicating, and parenting the duplicate to the preceding effector. The more bones you have, the more fluid motion you can achieve (image 11).

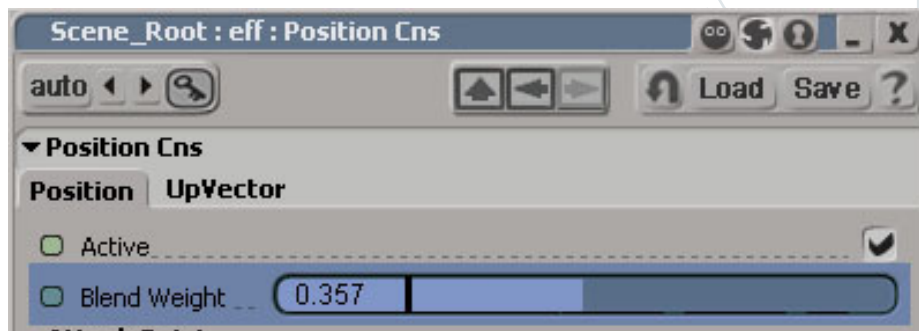


image 7



image 8

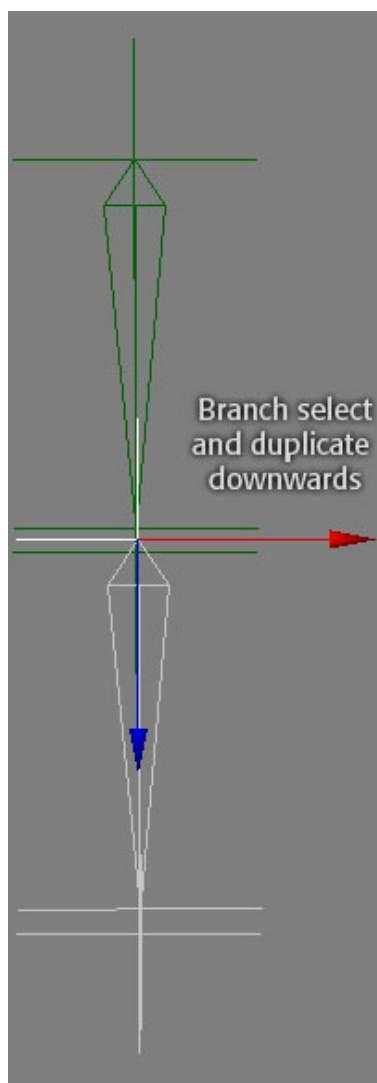


image 9

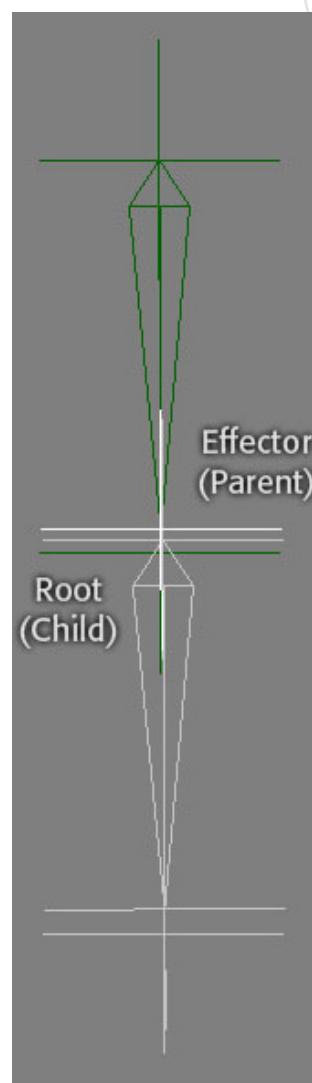


image 10

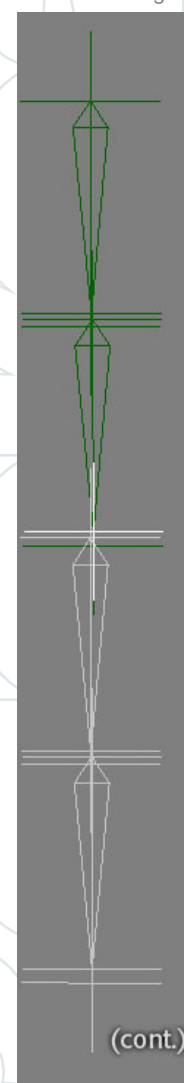


image 11



Now time to test out the chain. Translate the original root in your view; the chain should lag behind based on the blend weight percentage you set (image 12).

You can adjust this by selecting the appropriate effector and opening its Position Constraint window, which is easily found under 'Selection' on the right side of the screen. In some cases, you may find it more believable to have a higher Blend Weight on effectors closer to the root than gradually decrease towards the end of the chain (image 13).

If any of the roots are rotated, the following chain links will adjust accordingly (image 14).

This allows for easy adjustment to fit meshes. Once it's drawn and setup correctly from one angle, adjust the rotation of the roots as needed in another. This chain is what I used for the canopy branches on my model. The original root was the child of the hip bone on the beast, so once he was animated the canopy bounced to his steps.

I used single bone soft constraints for hard items that needed secondary motion like the skulls, jawbones, water bag, horn, etc. Using a single bone soft position constraint for these objects allowed them to pivot at their designated spots (where the root was placed) and to keep their volume. For my model, there were quite a few accessories that were weighted to single or small soft constraint bone chains, and had their roots being children of the hip bone.

After setting up this type of chain a few times, you'll get used to the procedure and will start to understand how and why it works. Keep in mind you can even use the basic position constraint to get certain effects you want.



image 12

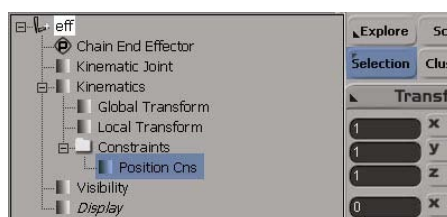


image 13

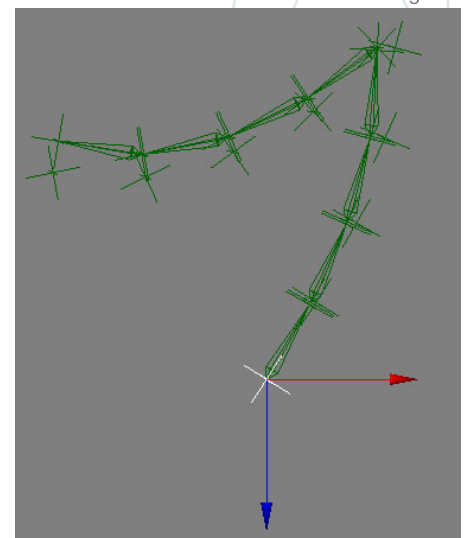


image 14



To setup the spear quiver I simply used a combination of soft position constraints and specific weighting. The spear basket was weighted 100% to the yellow implicit sphere, which was a soft position constraint of one of the spine bones. The top section of the spears were weight 100% to the green implicit, which was a soft position constraint of the yellow implicit. The spears' grip was weighted appropriately so that it stayed with the shaft. I also set up a couple more soft position constraints with the blue and red implicits and weighted appropriately to give the spears' feathers more life (red constrained to blue which was constrained to green) (image 15).

This similar method was used for the dreamcatcher and antler sinew as well.

You've noticed that these soft constraints will interact real time. This is because its based on the previous frame for its calculations. If you happen to be rendering on multiple machines, you may need to bake in the animation of the constraints (image 16).

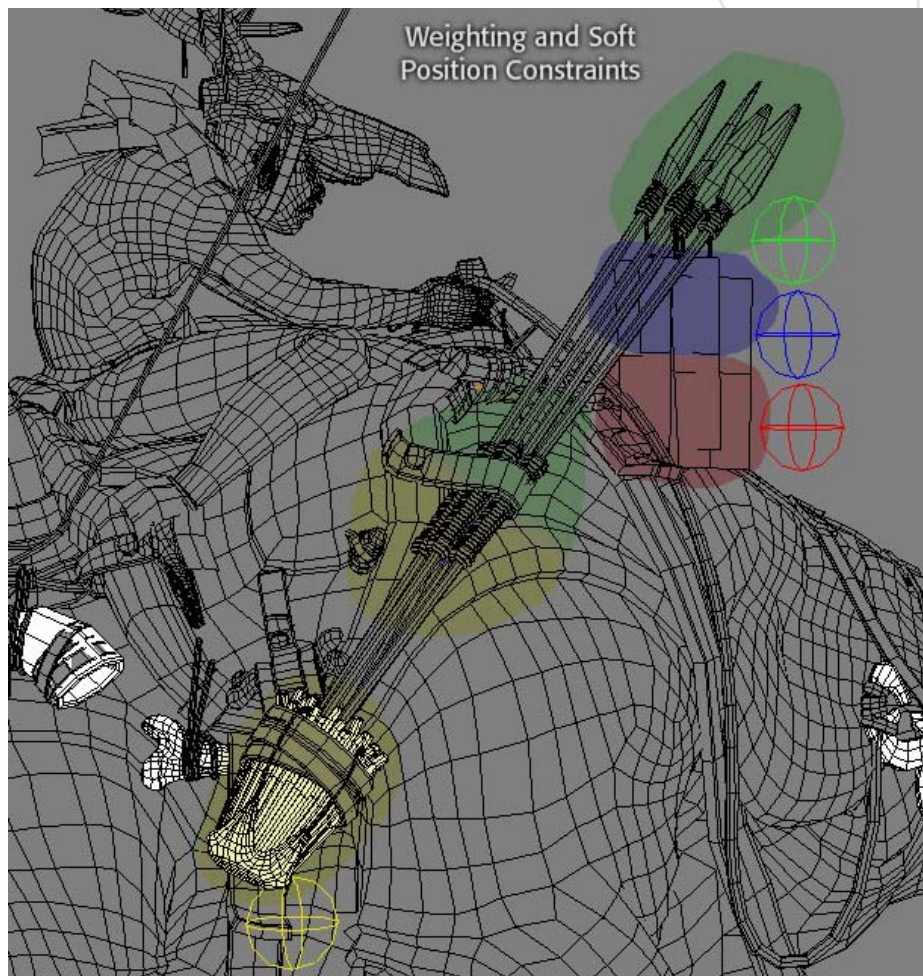


image 15

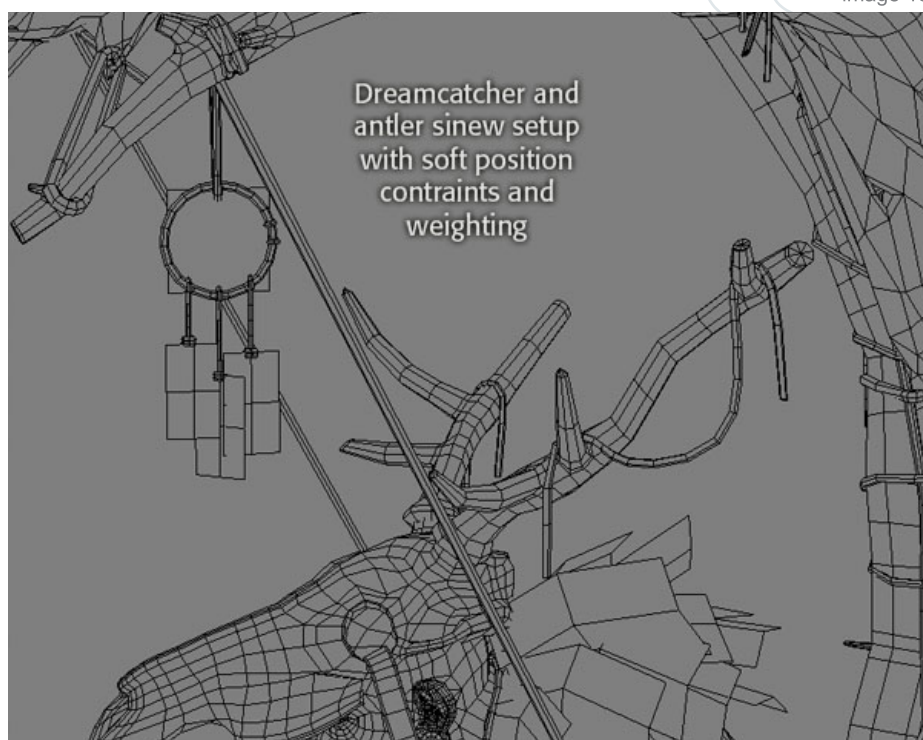


image 16

Do this in the animation toolbar by plotting all transformations for all the soft constrained objects (image 17).

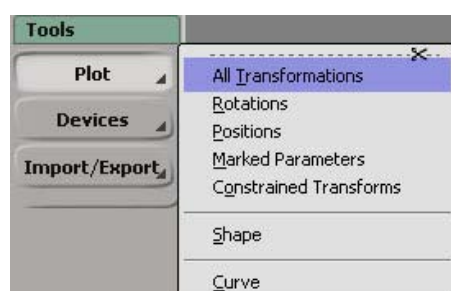


image 17



After the transformation is baked in, you'll have to remove the constraints from everything to make sure it does overwrite the animation already baked in. This may take a while depending on the number of constraints you have setup.

The only other complicated feature of the rig on Moosah and Chub was the syflex setup, which was created for the two reigns, flag and canopy cloth. Having the Syflex cloth react with the canopy branches and loops involved a huge combination of Syflex nails and position constraints, but Syflex is a whole other setup (image 18).

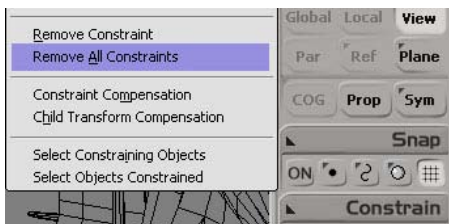


image 18

Thanks for reading, and happy rigging!

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Welcome to our ongoing tutorial which will provide a step by step guide to building a low poly character based upon a model by Seong-Wha Jeong. Over the next eight months we will be covering how to build, map/unwrap and texture the character.



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Page 121



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Lightwave Version  
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Maya Version  
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Softimage XSI Version  
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...This article will show you what kind of work methods, that I've used to create the image '1954 Mercedes-Benz 300SL Gullwing' (not a very imaginative title, I know). The whole project started as a means to improve my modeling skills and at the time, I had already a few years experience with CAD software and some with 3dsmax. So I decided to model the car with 3ds max 5, with the final renderings done with Brazil 1.0...







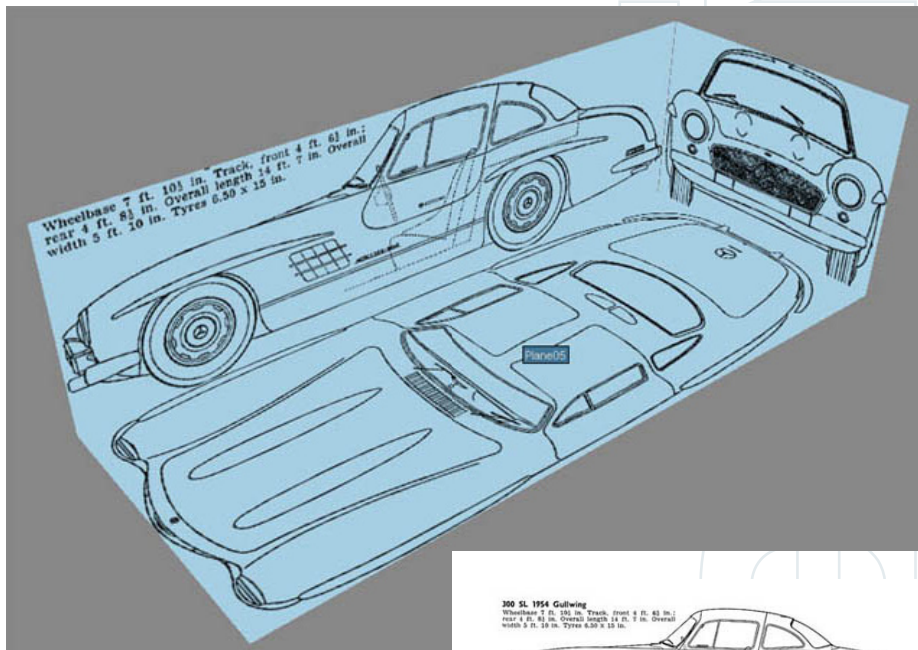
making of

## 1954 MERCEDES-BENZ 300SL GULLWING. BY RAFAEL

First of all I had to decide what kind of model it was going to be. The materials had to be simple, because the modelling was the main focus. Any car can be nice, clean and shiny, but which one was I going to model. Finally the decision was made, and I decided upon making a '1954 Mercedes-Benz 300SL Gullwing'. It's unique and recognizable design, which makes it very much different from most of the other cars, classic or new.

### PREPARATIONS

Gathering good reference material can take up a lot of time, but pays off as it can also save you a lot of time later in the process. My initial reference was only a scale model car and if you are trying to make an accurate model of something that exists, this is not enough. The best way is to find blueprints of whatever you are making. I was lucky enough to find blueprints which were pretty accurate and I only had to cut out individual views and to tint them a little (to make white edges of selected mesh more visible). There was no need to squeeze them in order to make views fit each other better, which can sometimes be the case. Then the materials with individual views were assigned to planes which are exactly the same size as the real car (image 1). When all is set, rough modelling can begin, however that is still not nearly enough to finish the job. Blueprints do not show everything and the best way to get all of the fine details would be to



have access to the real subject. That almost never happens so you have to take a look at photographs of it (as much as possible to cover all the angles). I carefully studied all the pictures of "Gullwing" I could get, both digital and in magazines or books. Detailed pictures of the interior were particularly invaluable (image 2). Basically there is no such thing as too many reference photos.

### MODELLING

The idea behind this project was to learn how to control meshsmooth modifier effectively and to create as accurate shape as possible without using too many polygons, so most of the model is done by editing primitive objects which are later smoothed.

To start modelling a piece of mesh I made a primitive object that is the most similar in shape to that piece (usually it was a plane,

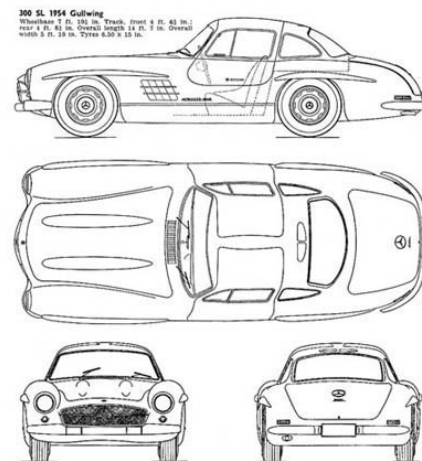


Image 1

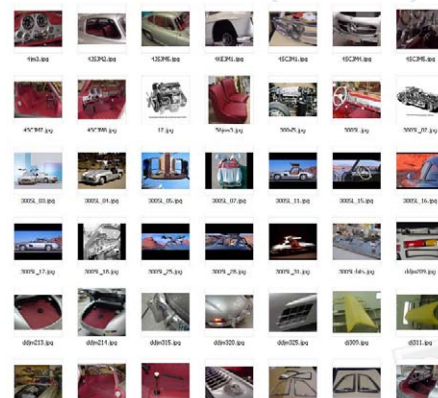


Image 2



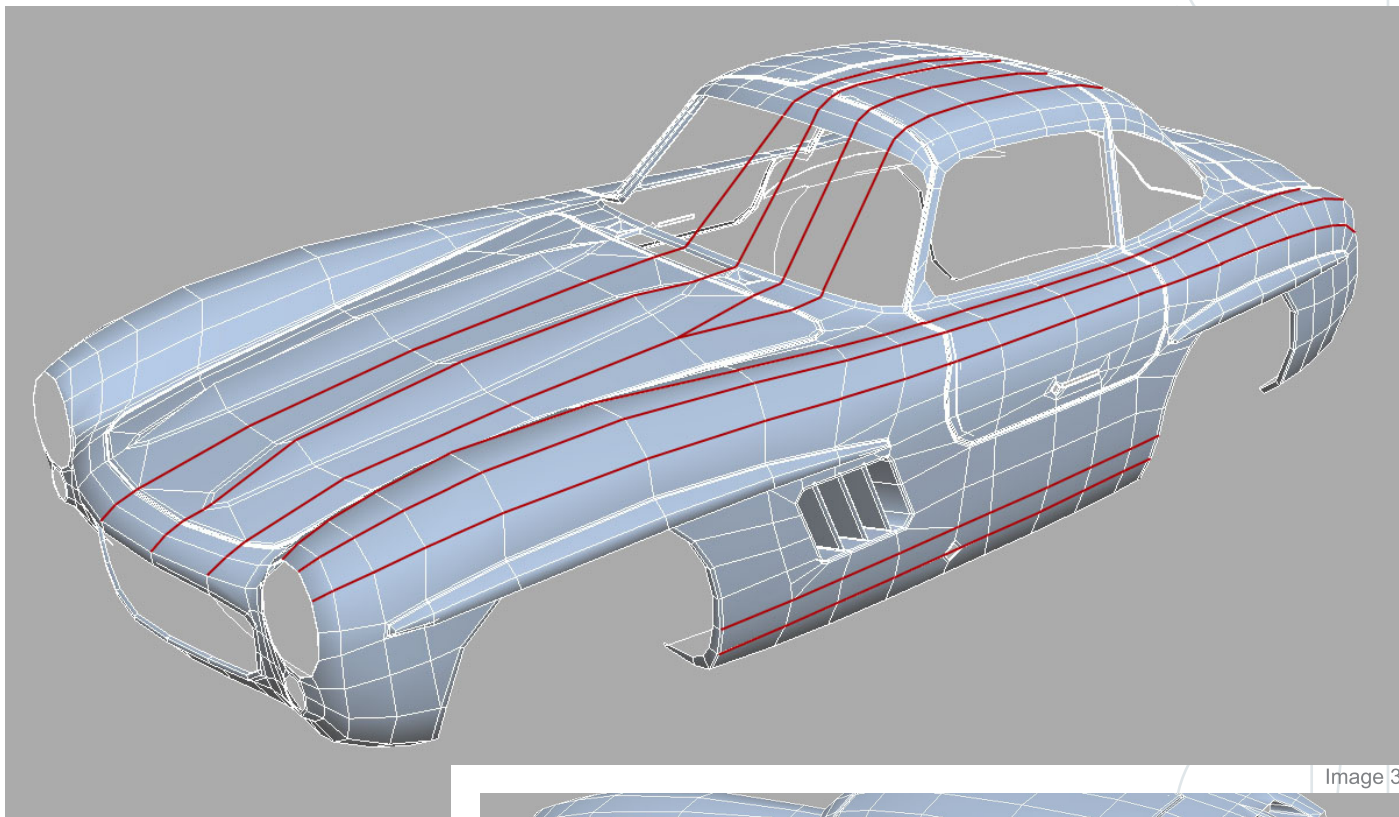


Image 3

a box or a cylinder), converted it to editable mesh or poly and continued with extruding, cutting, welding etc. In modelling the whole body particular attention was given to smooth transitions in shape. Mesh edges, especially those that go along the length of the car, form smooth lines that follow shape of the car (image 3). In general, when working with meshsmooth, it is best to maintain tidy quad mesh in all areas, but if shape of the model is more complex than a box, you can't do that. There has to be occasional triangle or a pentagon. On curved areas triangles can cause unwanted pinches in smoothed mesh so in that case it is better to go with pentagon, it too can make problems but not as many. However on flat or near flat surfaces you can get away with almost anything and that is good place where to deal with all those loose edges (image 4).

Using meshsmooth on smaller details doesn't make much sense so majority of badges and

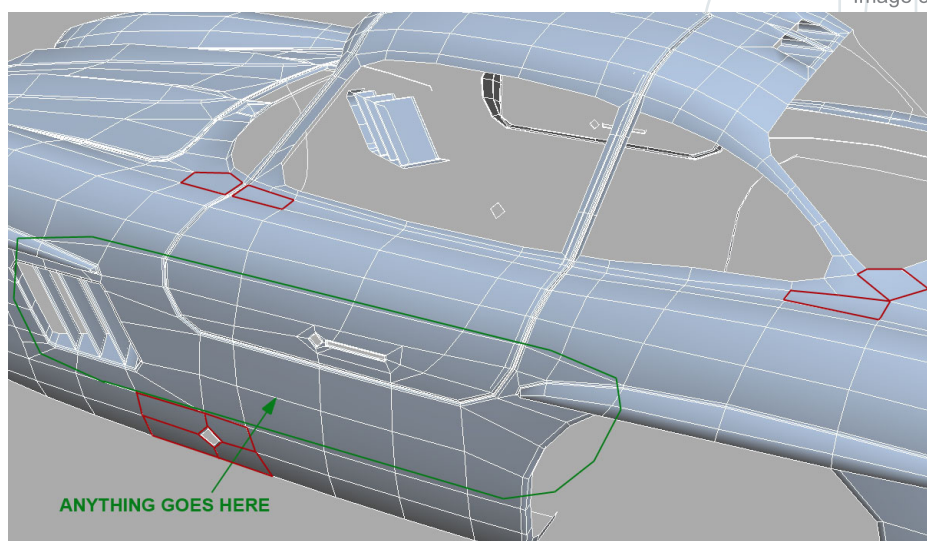


Image 4

interior details are just box modelled (image 5). Badges can be conformed to the smoothed body by some sort of deform modifier, bend or FFD, whichever is more suitable at the moment. Those modifiers are best left in the stack because then it is easier to just correct modifier parameters to compensate any changes in body shape and the mesh itself stays intact.

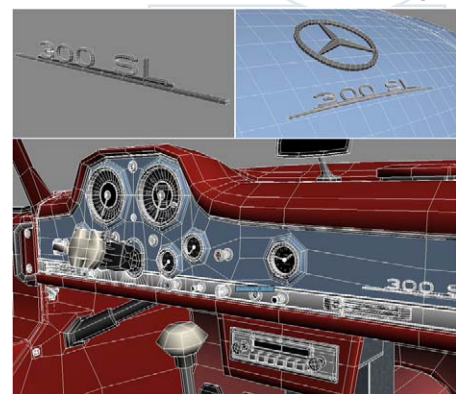
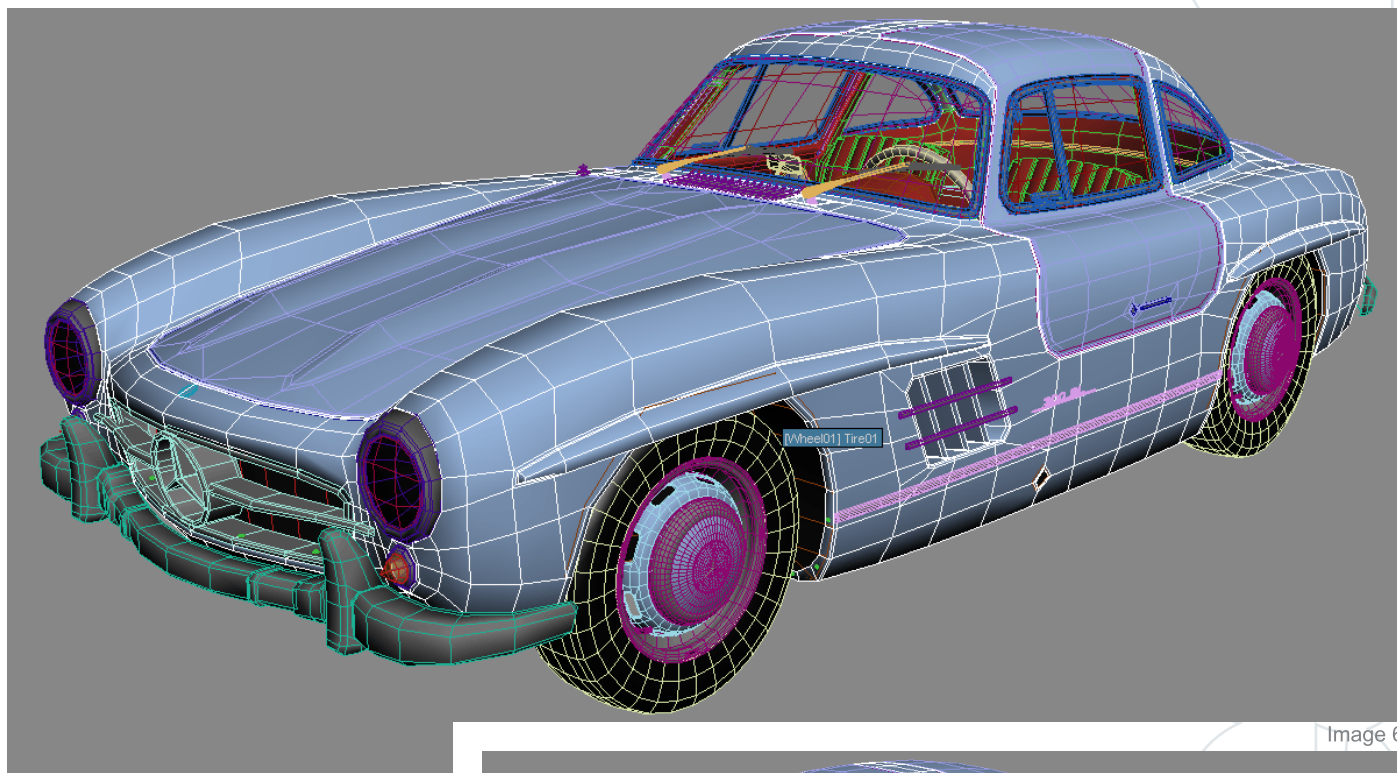


Image 5





Finished model (images 6 & 7).

## MATERIALS & TEXTURING

A lot of people seem to be in a quest to find a “perfect car paint” and there are many ways to get metallic or pearlescent effects. I on the other hand wanted to achieve ordinary gloss paint effect and it is fairly simple. Material used on body is double sided. Back material is standard dark grey material without specular. It used just to avoid seeing through back side of bodywork if it is revealed somewhere.

Facing material is Brazil Advanced, but it could be any sort of material which enables use of raytracing. Colour is set in Colour slot and only map used is Falloff map in Raytrace slot. All materials have that characteristic that reflection depends on angle between line of sight and surface of the material. Material looks the most reflective when line of sight is almost parallel to surface and the least when it is perpendicular. Falloff type is set to Fresnel and index of refraction override to 1.3 (Fresnel type falloff depends on IOR) (image 8). Material settings

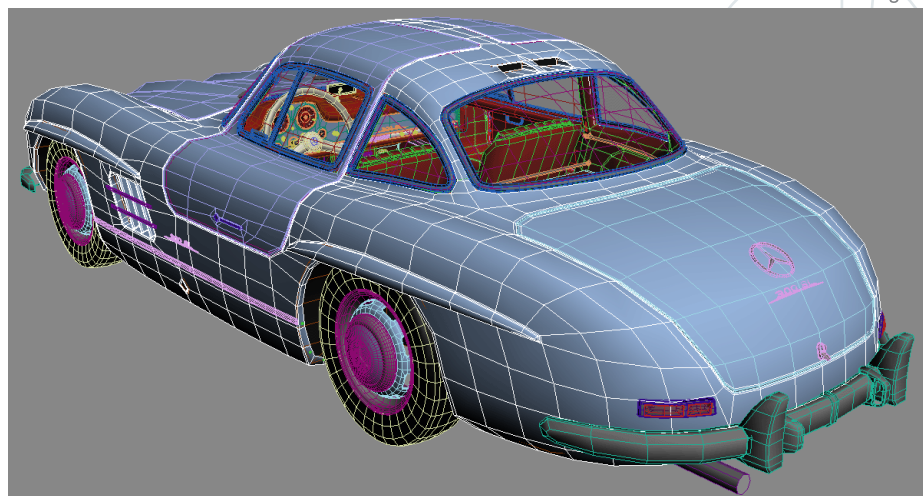


Image 7

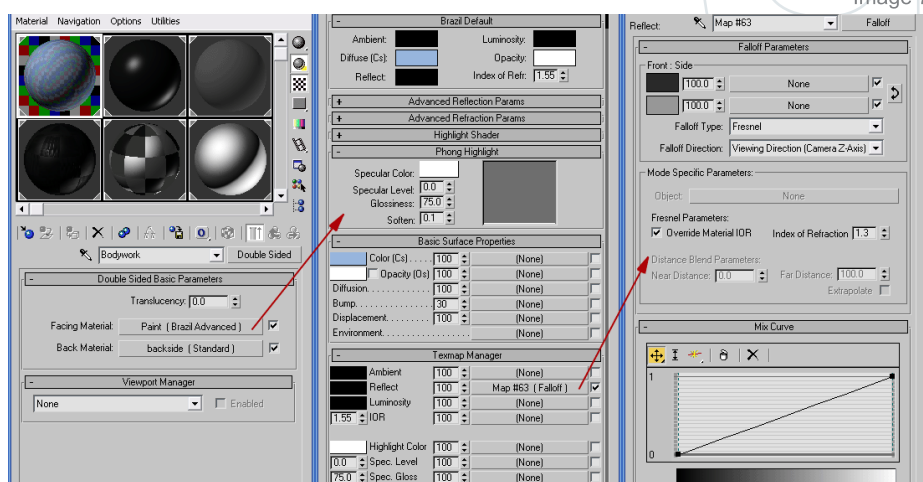


Image 8





Image 9

for chrome are basically the same as for car paint. Only differences are higher reflections and dark gray colour instead of light blue.

Glass material is Brazil Advanced, 2-sided, 95% transparent with similar falloff map in reflection slot. Falloff type is also Fresnel but with IOR 1.5 (standard IOR for glass). Windshield and all other windows on this car are thin walls, some 6mm thick. That combined with IOR gives some nice realistic effects which couldn't be seen if windows were simple surfaces (image 9). Headlight material follows the same principle as normal glass but instead of being 2-sided it is double sided. Facing material is completely the same while back one is fully transparent with only IOR of 1.5 and a bump map (image 10). All glass objects have cast shadows option disabled to speed things up with rendering and in case shadow maps are used.

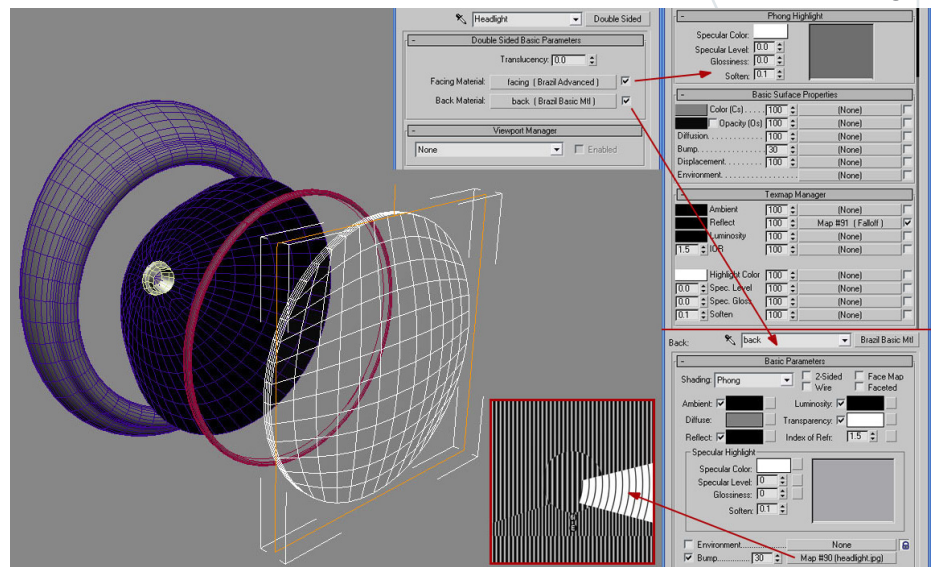


Image 10

Leather is standard material with cellular maps. There is one in the diffuse slot which serves to give a slight variation in colour and one in the specular level slot, which has the same parameters as the one in diffuse slot (image 11).

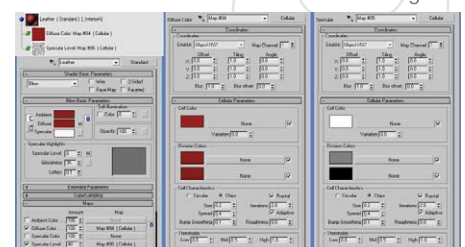


Image 11



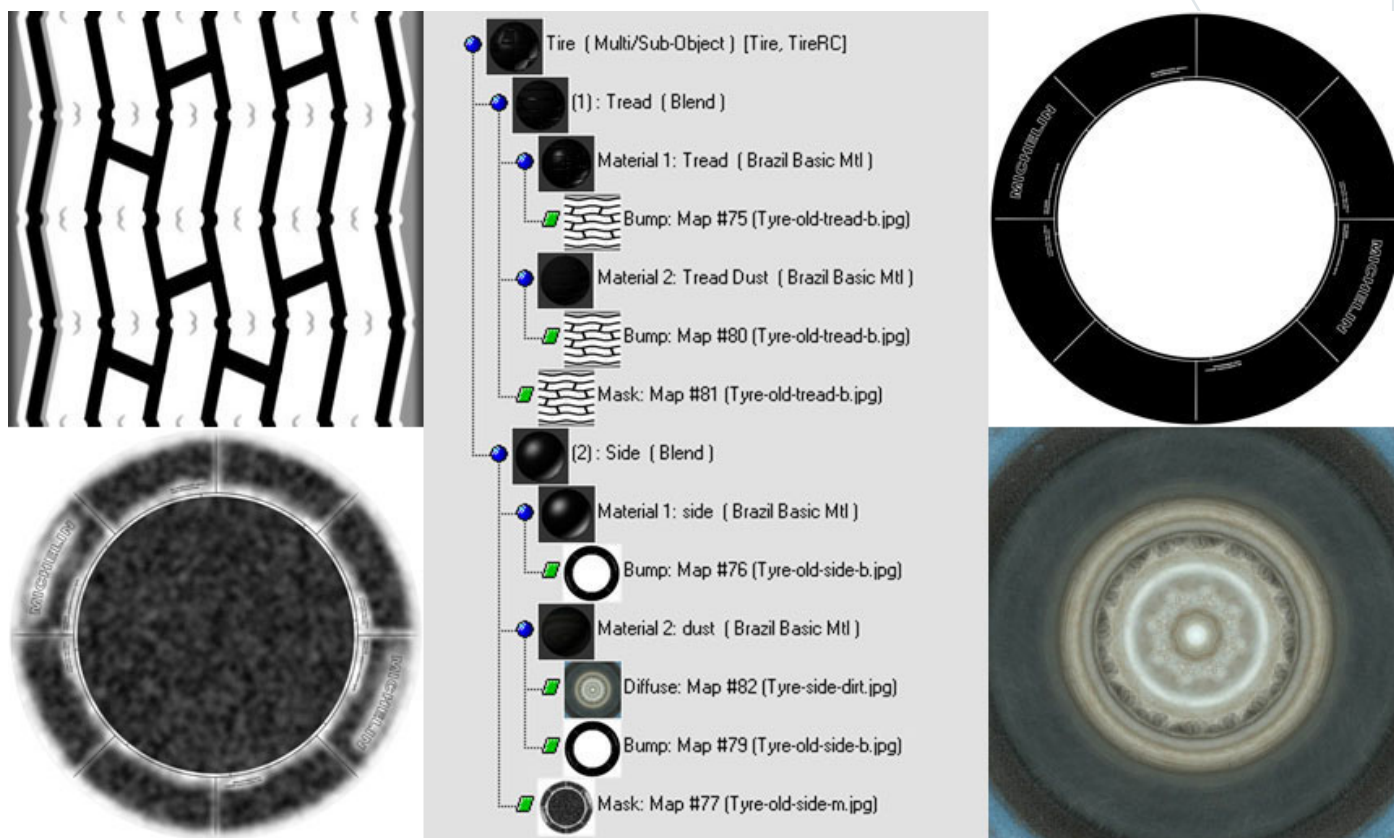


Image 12

I have tried modelling tire tread but this kind of tread needed adding more and more polygons to make it look good so I finally gave it up and went on with bump maps. Both tread and sidewall consist of blend materials. Each blend material is made of one clean looking and one dirty looking material. There is nothing special on them, no reflections, just a little bit of specularity on clean ones (image 12).

## SCENE & LIGHTING

The scene setting is really the simplest thing about this image, one floor one light plane and black background, that's it. That is simplified setting of a car photo shoot I saw some time ago on the Internet. There were some excellent photographs made by a professional photographer who specializes in cars. Mostly of old timers and car studies. Fortunately enough there was also a photo of light and scene setup. It worked great with those photographs so I hoped it will also work

well for me. The floor is done with Brazil CSG server but ordinary plane with high enough scale factor would do the trick exactly the same. The light is a big plane (18x5m) with white map that has RGB multiplier set to 2,5. The original scene that I saw also had a big light body, maybe not this big but it was close.

Anyway in test rendering this size of both light and light plane looked the best to me (image 13).

There is only one real light in the scene. It is Brazil light with light source type set to rectangle area. It is exactly the same size and position as light plane and all settings are

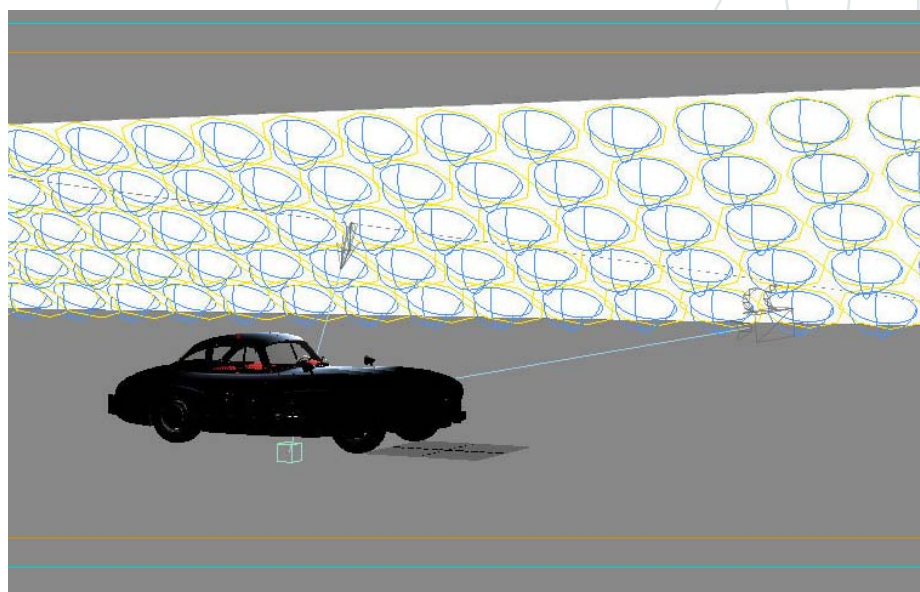


Image 13



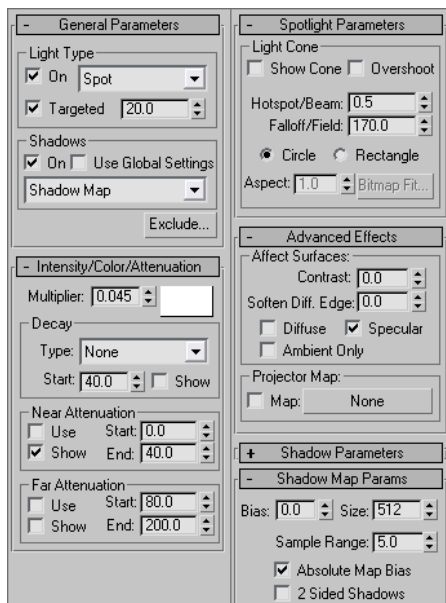


Image 14

default. I didn't like specularly that this area light gave so I turned it off and made array of spotlights aligned with light plane. There are 90 of them, one per square meter, and in affect surfaces only specular is turned on (image 14). Since the main light multiplier is 4.0, multiplier on those specular spotlights is conveniently set to 0.045 (roughly 4 divided by 90). Images rendered from this scene are pretty much done and don't require almost any editing (image 15).

For the final submitted image I played a little with adding glow in Photoshop. Just copying layers and messing about with Gaussian blur and opacity settings. And that is basically it, nothing too smart. Biggest work here was definitely modelling job. I have no idea how much time did it take to make it. This was a project that I worked occasionally on, plus it went through one major reworking when it was practically done and few sessions of tweaking. So it was hard to keep track of time spent on it. Hope that what I learned can now help someone else.

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**RAFAEL**  
 136dof@gmail.com

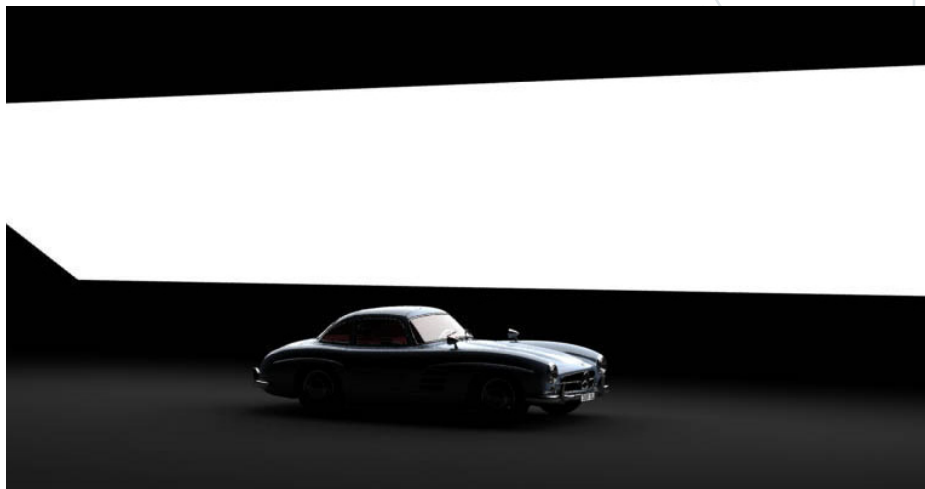


Image 15





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...This is the scene I created using 3DTotal.com's Total Texture CD for texturing. The software used includes: 3dsmax 8, Vray Advanced, Greenworks Xfrog and Adobe Photoshop CS2. I will try to concentrate on the main aspects of creating the scene so I hope you are quite familiar with the above software....

# MAKING OF ROOF GARDEN

BY LUKASZ SZEFLENSKI







## ROOF GARDEN BY LUKASZ SZEFLINSKI

This is the scene I created using 3DTotal.com's Total Texture CD for texturing. The software used includes: 3dsmax 8, Vray Advanced, Greenworks Xfrog and Adobe Photoshop CS2. I will try to concentrate on the main aspects of creating the scene so I hope you are quite familiar with the above software.

My intention was to create a natural looking late evening scene using HDRI lighting method with photometric lights.

### MODELLING

All modelling was done by polygons (image 1). Trees I created in Xfrog. Here are the screen shots (image 2 and 3):

Later I imported them into 3dsmax and created Vray proxies. Doing so, I avoided all the problems with not having enough memory during rendering.

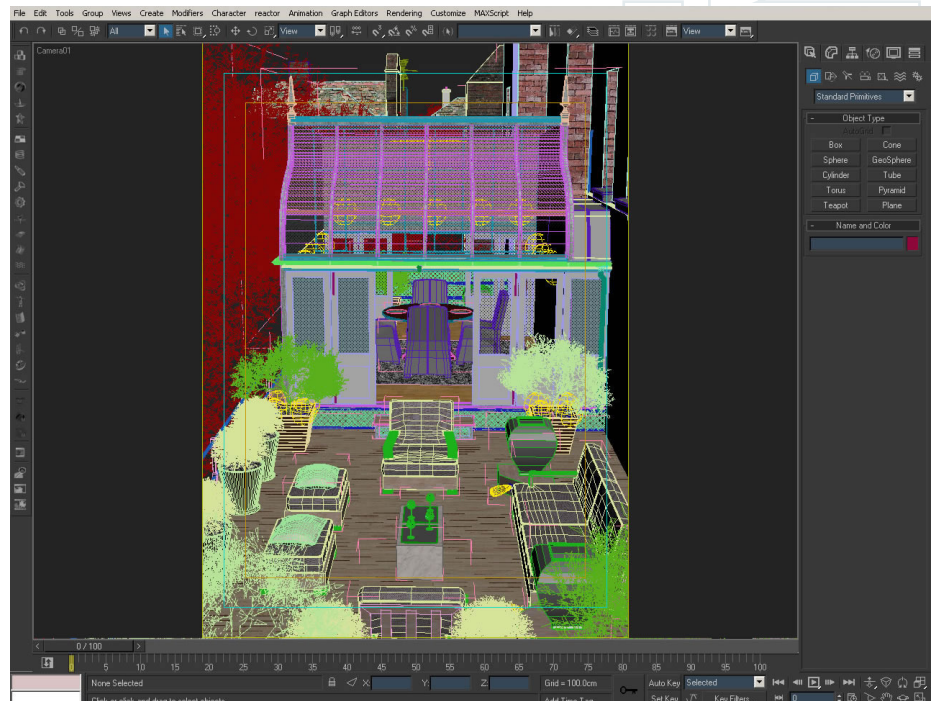


image 1

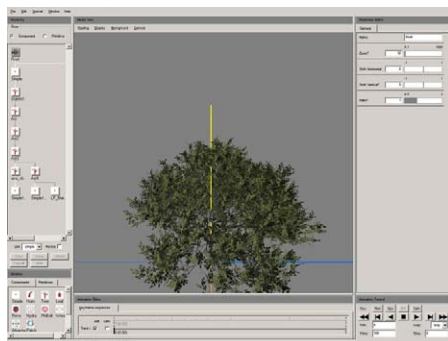


image 2

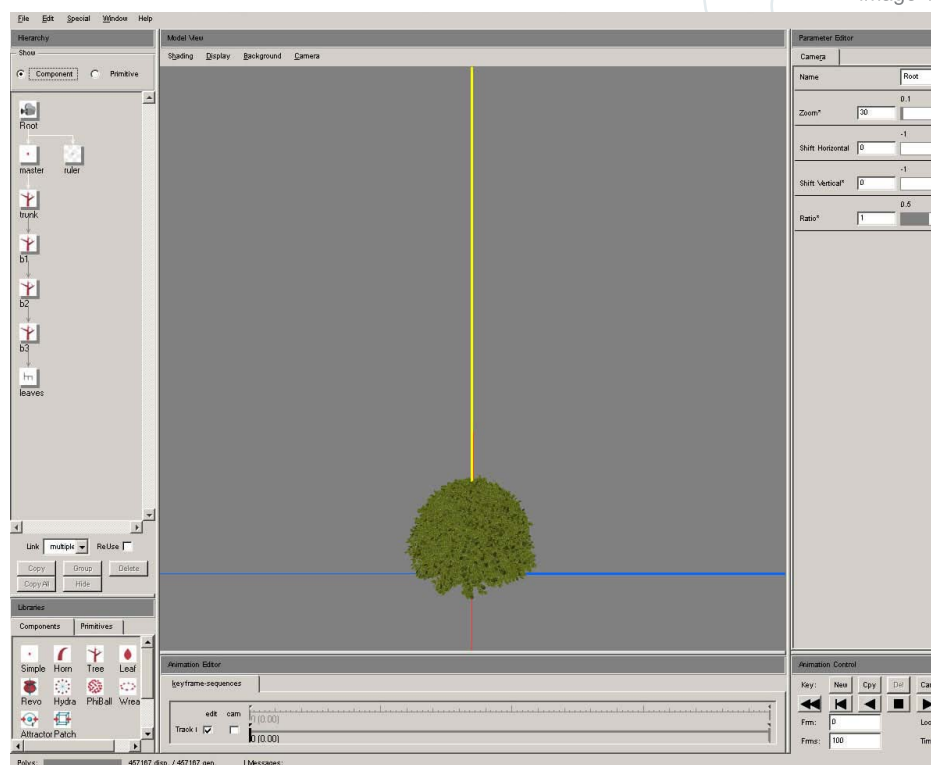


image 3





## TEXTURING

I don't like to complicate things when I don't have to, so the textures I used come straight from the 3DTotal.com Total Texture Cd's without much post processing in Photoshop (just some minor level or colour adjustments). The only exception is the carpet inside the glass house because I created a black border around it in order to prevent it from flying when using Vray displacement. Here are the textures I used for this project (image 4).

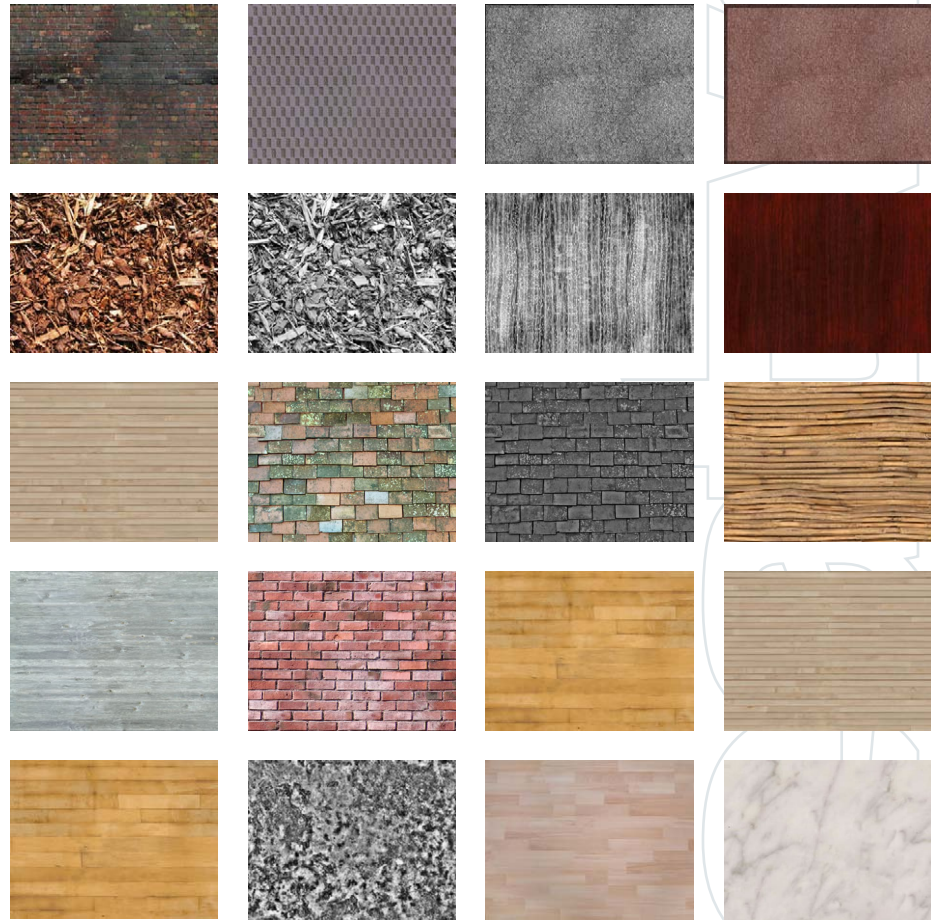


image 4

## RENDERING

The lighting is based on HDRI, there is no direct light. This is how I set up HDRI in my scene (image 5). In project for fixture lights I used photometric data. Lights inside the glass house are standard photometric (image 6).

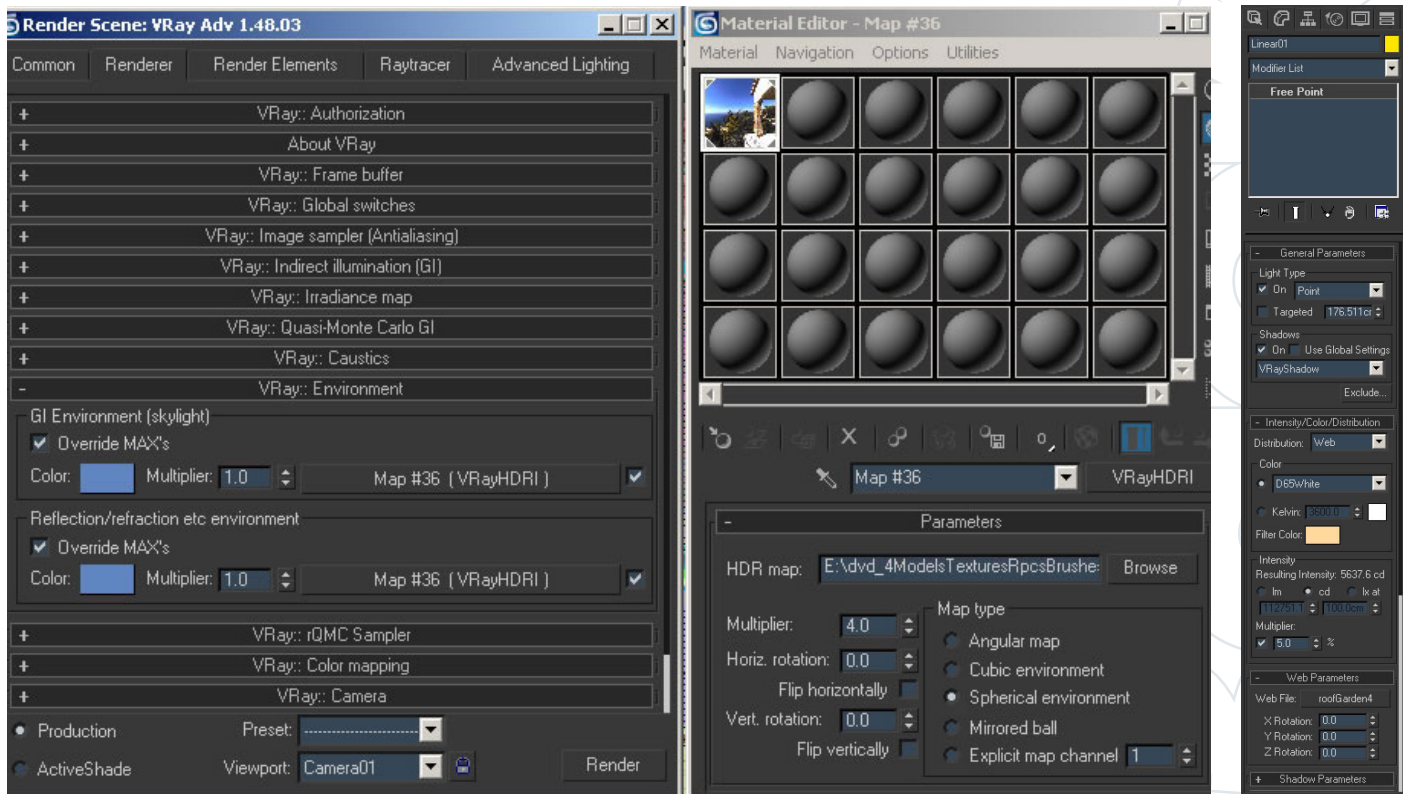


image 5

image 6



For outside fixtures I created my own IES light with this program: [www.tom-schuelke.com/pies.exe](http://www.tom-schuelke.com/pies.exe). Here is a screen shot from the one I created (image 7). And in 3dsmax it looked like this (image 8).

Here's the final rendering screen (image 9)  
As you can see, the final rendering took 242 hours. Basically it's because of a lot of trees in the scene.

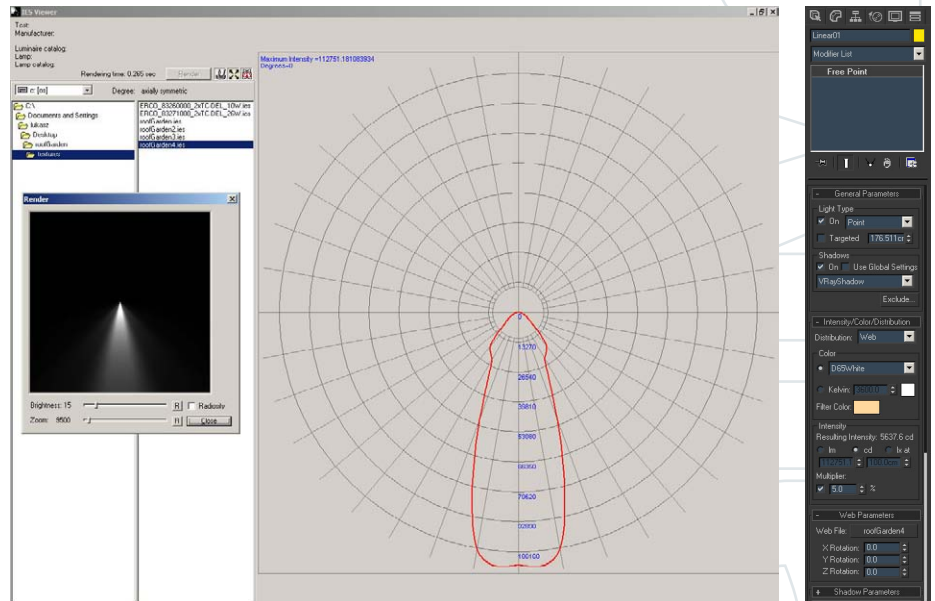


image 7

image 8

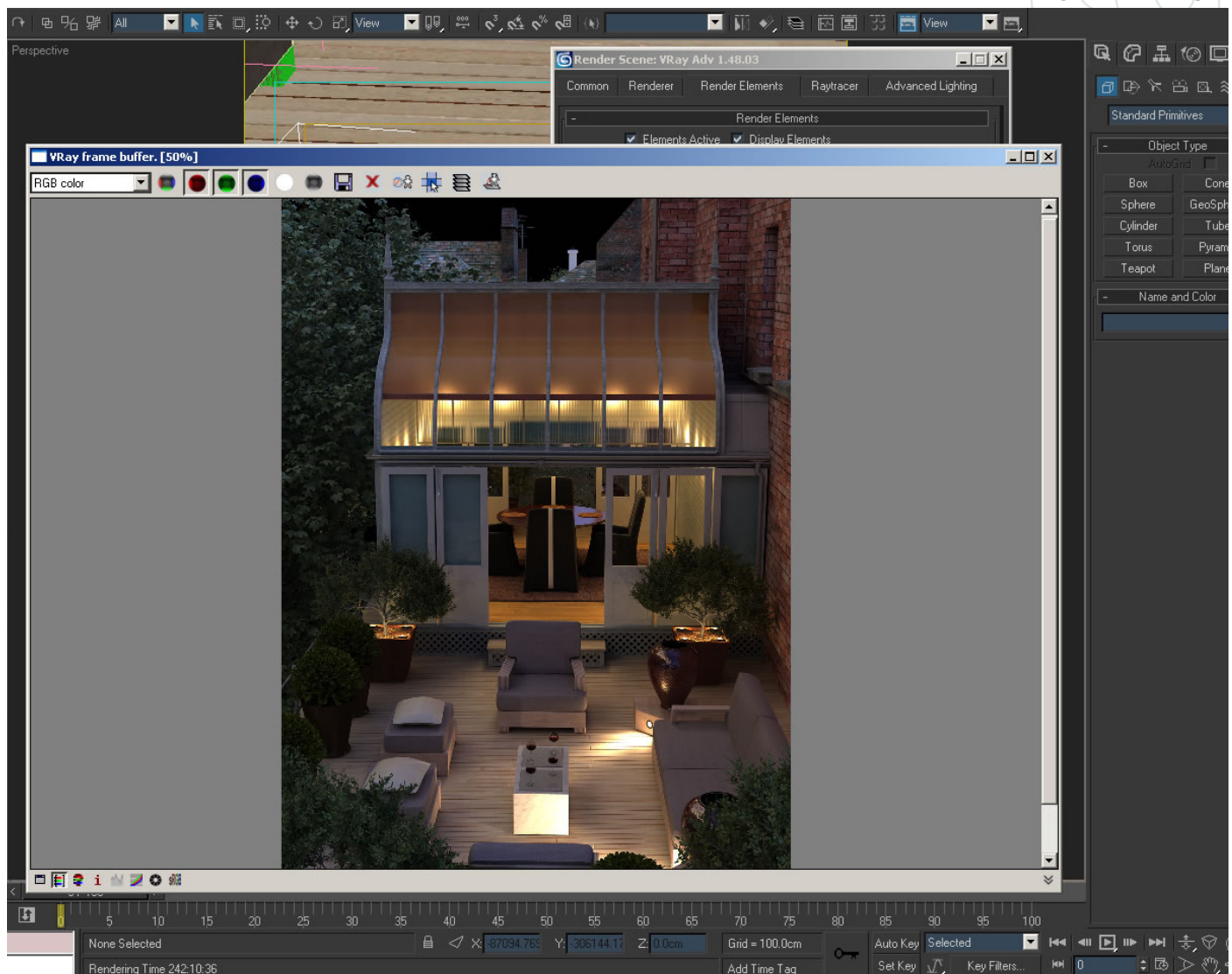
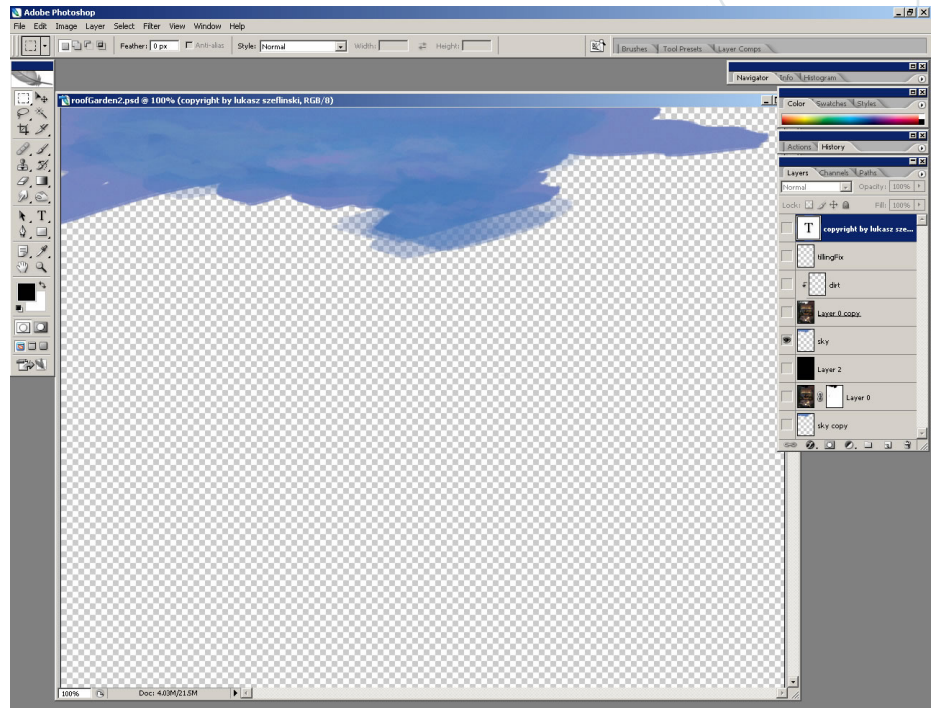


image 9



## COMPOSITION

First I painted a background sky in Photoshop (image 10).



I also painted some small amounts of dirt in two places.

Before (image 11).



image 11

After (image 12).



image 12

Before (image 13).

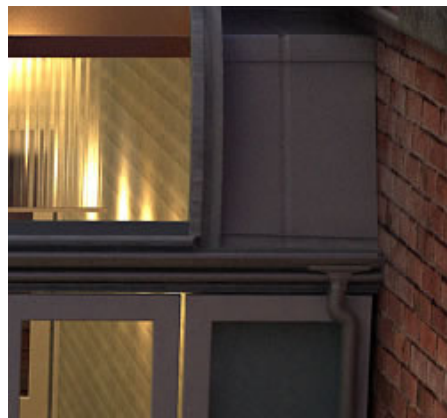


image 13

After (image 14).

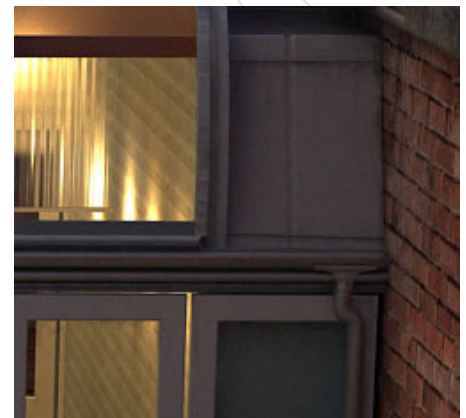


image 14

Another minor change was fixing tilling.

Before (image 15).



image 15

After (image 16).



image 16



And the final scene:

On this project I spent about 2 weeks for modelling (I was doing it in my spare time after work) and it took another month of tweaking materials and rendering.

I highly recommend the Total Textures collection to everyone who's looking for the best quality textures.

I hope this overview was helpful to you. If you have any further questions please don't hesitate to contact me via my website.

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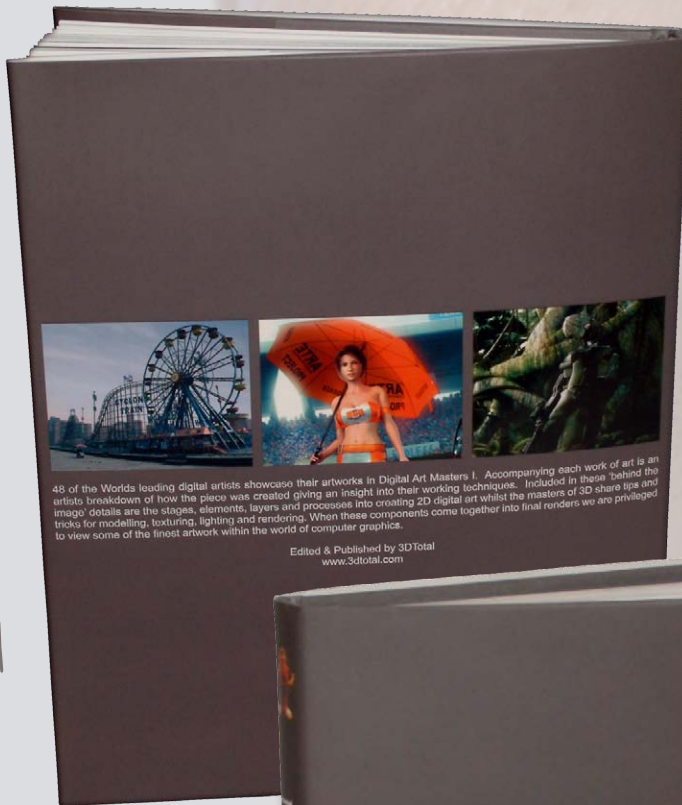
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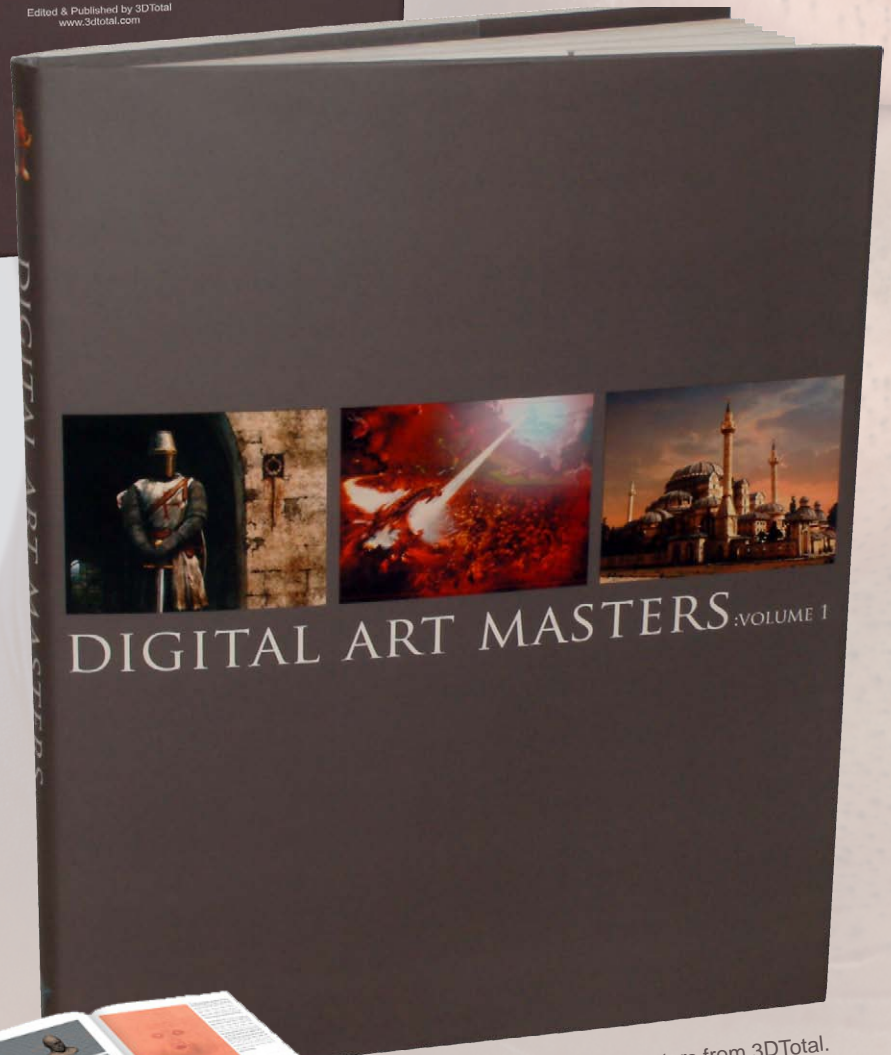


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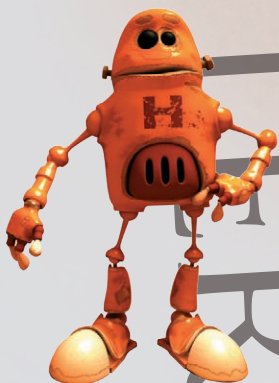


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we have exclusive chapters from 3DTotal.com's new book 'Digital Art Masters'. The book is more than just an artwork book as not only does it feature full colour, full page images, each artist has described the creation process in their own words, and exclusively for this book. This month we feature:

**'The Fatman'**  
by Omar Sarmiento





## The Fatman

By Omar Sarmiento



### Modelling

The fatman has been modelled with subdivision surfaces in Lightwave following the patch modelling method. I started building the eye area, alongside the nose and the mouth, which are the key elements of the model, and then later welded them together which then formed the basic facial structure (1). It's important here to create a good simple mesh topology to ensure that the model will respond correctly to facial deformations. It's also a good idea to study the muscles of the face and how they behave. I have tried to keep the mesh as simple and clean as possible, and by doing so the process of texturing and characterisation of the model is easier and faster.

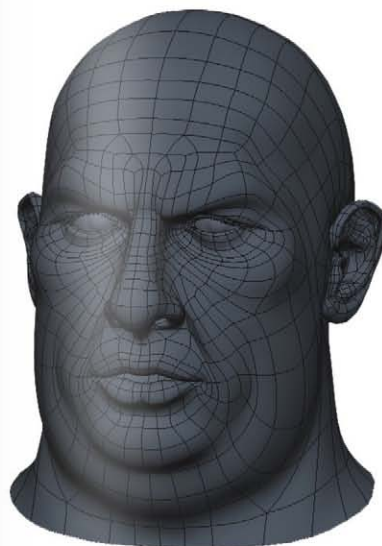


fig 1

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### Lighting

This model has been lit, textured and rendered with Softimage XSI. I have used Global Illumination in this case within the Mental Ray renderer. The lighting set-up is basically a kind of three point lighting rig (2). I have used a spotlight with soft area shadows as the key light, and as a light I have used the Real Gathering (Global Illumination) effect taken from a background image, and then finally added another spotlight with area shadows, as the side light to separate the image a little from the background and give some mood. I played around with the light colours to give some variation to the image, for example the side light is blue tinted. In this work and in general with works where realism is the aim, we must take good care of our lighting set-up because it will be the base of our work and it's intimately connected with the texture/shading process, so our textures will not look right if we fail at this point, on the other hand, the lighting has helped define the volumes of the model and create the overall mood in the scene (3).

### Texturing

The texturing and shading process has been the most elaborate and the most challenging too. The human skin is one of the most difficult things to render in the digital medium in my opinion. I started with the shading process without textures, with only a diffuse base colour and the bump map applied and tried to simulate the properties of the human skin. One of the most important aspects of the human skin is its translucency so it was my main aim to reproduce this. I used the 'Diffusion' shader (4) created by Daniel Rind ([http://www.briandaniel.com/links/links\\_diffusion/diffusion.html](http://www.briandaniel.com/links/links_diffusion/diffusion.html)). If you don't use XSI or Maya you can use some other sub surface scattering shaders available for 3D Studio Max, Cinema 4D, Lightwave etc. The Sub Surface Scattering effect consists of the result of the light travelling through the skin. It's an effect easily noticeable in the ears but it is present in the whole skin in some degree. Sometimes it's difficult to achieve the Sub Surface Scattering skin effect so a good idea is to start with some material that has this property but easier to notice and reproduce like wax, so a good starting point would be some wax like material.

The next key element is the specular/reflection layer, both of which I have used and combined the specular from this area light and real reflections from an hdri (high dynamic range) image, which help a lot in simulating the oily skin surface. When I was happy with the overall aspect of the skin material I started with the texture painting. All

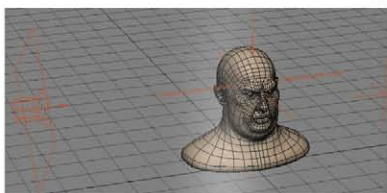


fig 2



fig 3

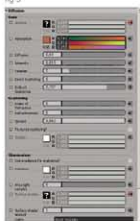


fig 4



fig 5

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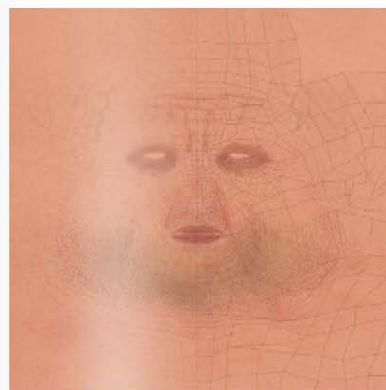


fig 6

the texture maps have been hand painted in Photoshop, the first one being the bump map (5), which was made previously to the shading, because it's like a part of the sculpting process. I took a lot of human references and close up pictures of human faces to see the wrinkles, pores etc, then I started to paint the main features and checked continuously in the renderer to see the results.

The colour/diffuse map (6) must be very detailed and should have a lot of variation and so I started painting the base colour and then adding spots of different tones and variations to achieve some irregular and balanced organic aspect. Another good idea is to copy the wrinkles and pimples previously painted in the bump map and copy them here giving them some saturation and an overall reddish tone, which will help with realism. Another couple of texture maps were made to control some specific shading parameters like reflection, specular and glossiness, which were made taking the bump map as the base and editing their levels and brightness/contrast in Photoshop.

### Portfolio examples



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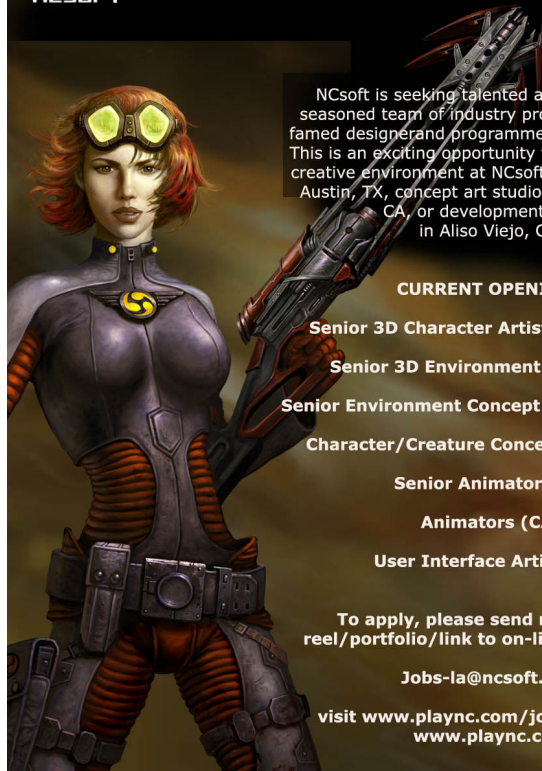
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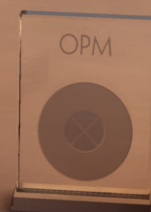
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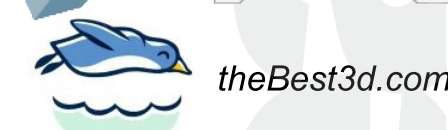
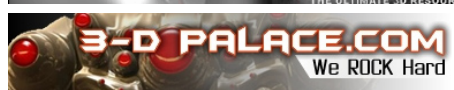
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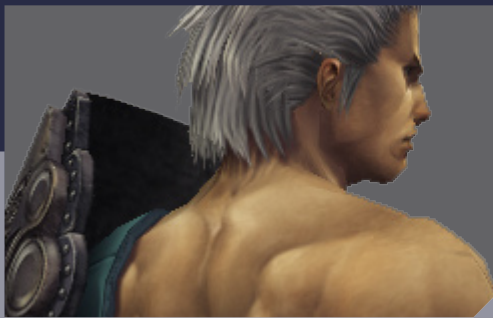
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Swordmaster



THE SWORDMASTER

## 3ds max

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## PART 2 MODELLING THE TORSO

### INTRODUCTION:

Welcome to the second part of an ongoing tutorial which will run over several months and provide a step by step guide to building a low poly character based upon a model by Seong-Wha Jeong. In this installment we shall start with the head model covered in last month's edition and build upon the mesh to create a torso.

1. If you have followed the previous tutorial on making the head then open that file and begin by selecting the bottom row of edges as shown in green in Fig01. Now hold down the "Shift" key and using the "Move" tool drag this row of edges downwards to make a copy. Remember that we still have the "Symmetry" modifier on top of the stack and so are only working on the left half of the mesh.

2. When you have done this start to pull the verts outwards to form the top of the shoulders (Fig02). You can see in the illustration that the small picture shows the positions that the new verts have taken up.

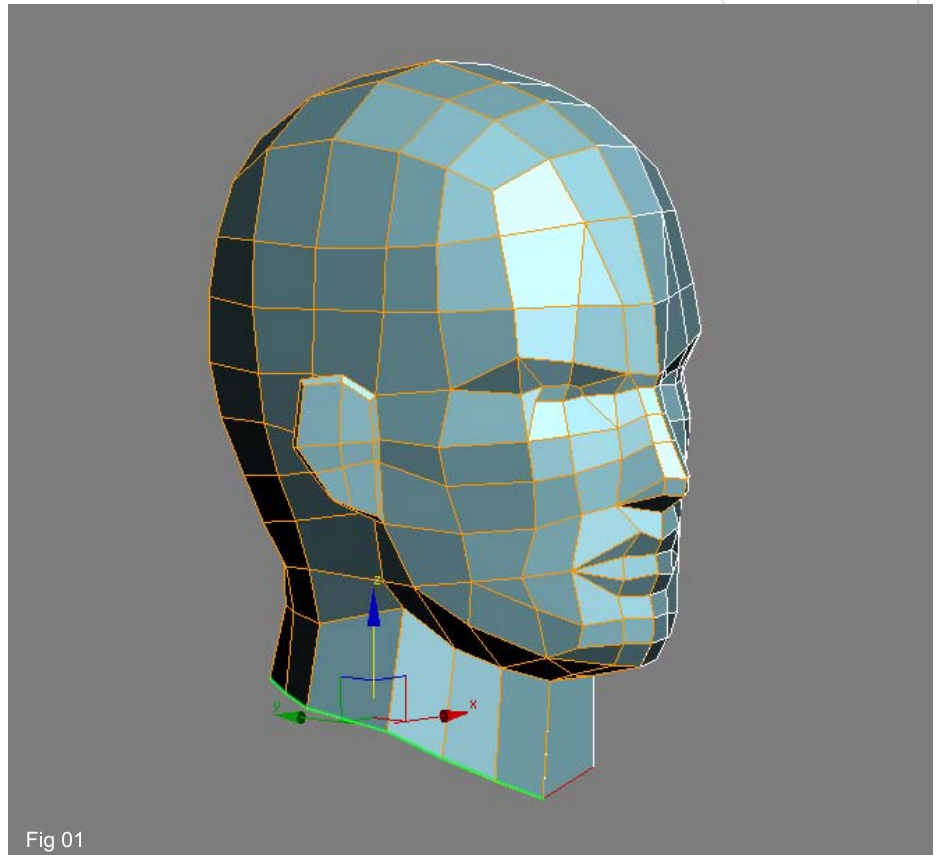


Fig 01

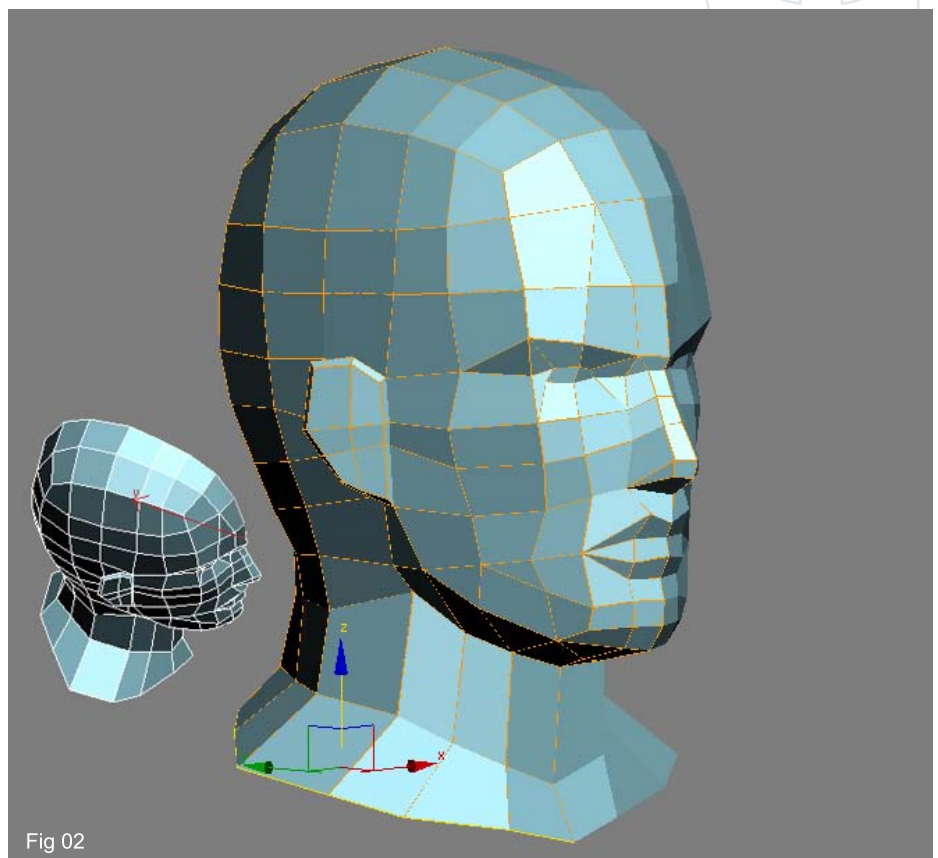


Fig 02



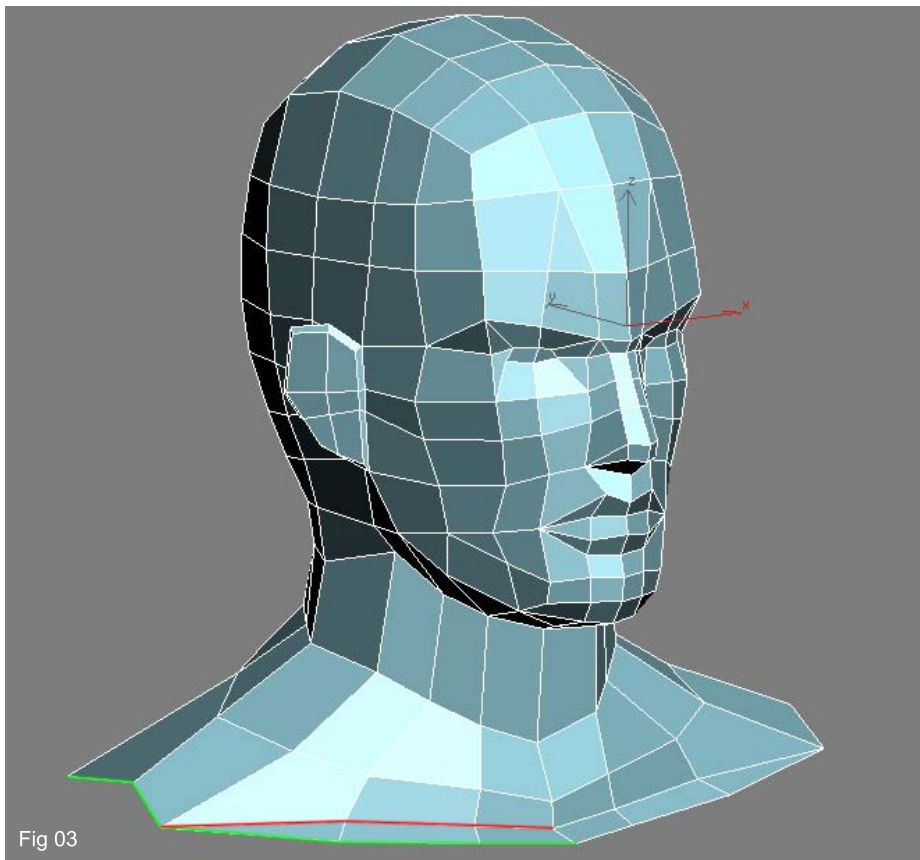


Fig 03

3. We are now going to make a cut across the front three poly's to form the clavicle as seen by the red line in Fig03 using the same technique as before – selecting the poly's in sub-object mode and applying the "Cut" tool.

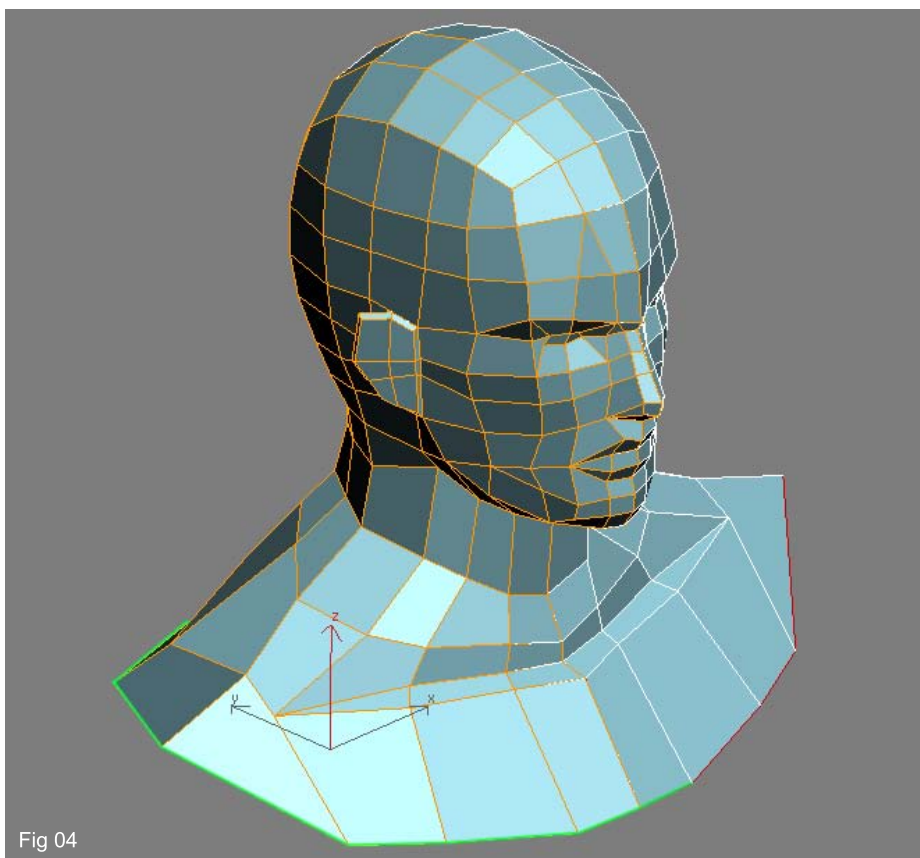


Fig 04

4. Now once again select this bottom row of edges and "Shift copy" them down and re-arrange the new verts to form a better shape (Fig04). It is a good rule of thumb that whenever you add more detail by way of copying edges or adding subdivisions you should move the new verts into suitable positions before adding any new edges. It can save time and is a lot easier to work this way.



5. We have made most of the shoulder area already by simply copying edges and re-positioning the new verts and now it is time to start to form the top of the arm area. We need to make two new cuts on the front and back poly's that form the outer edge nearest the left of the image. This is so we have enough edges from which to "Extrude" an arm later on. In Fig05 you will notice that these are represented by the first cut in green and the second in red – the new verts are then moved (red dots). We have now created two triangles by the last cut but these could be deleted and replaced by a quad if one so wished.

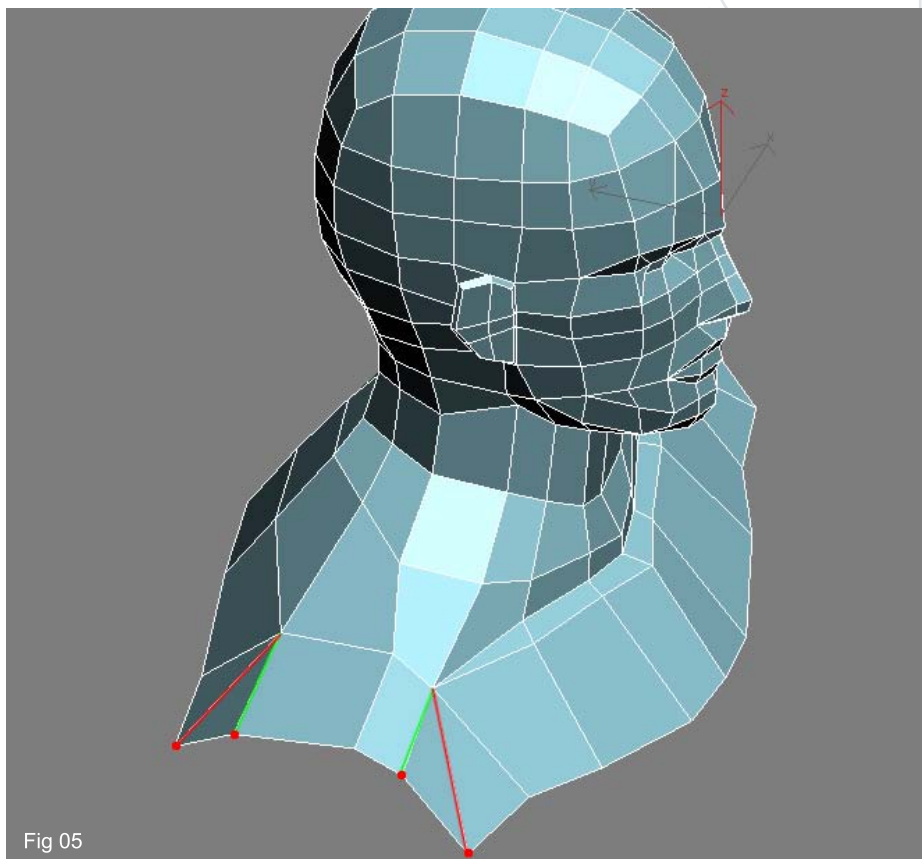


Fig 05

6. Now it is time to begin forming the chest area by selecting the bottom row of edges on the front of the torso (green line in Fig06) and duplicating them downwards (red line in Fig06) using the same method.

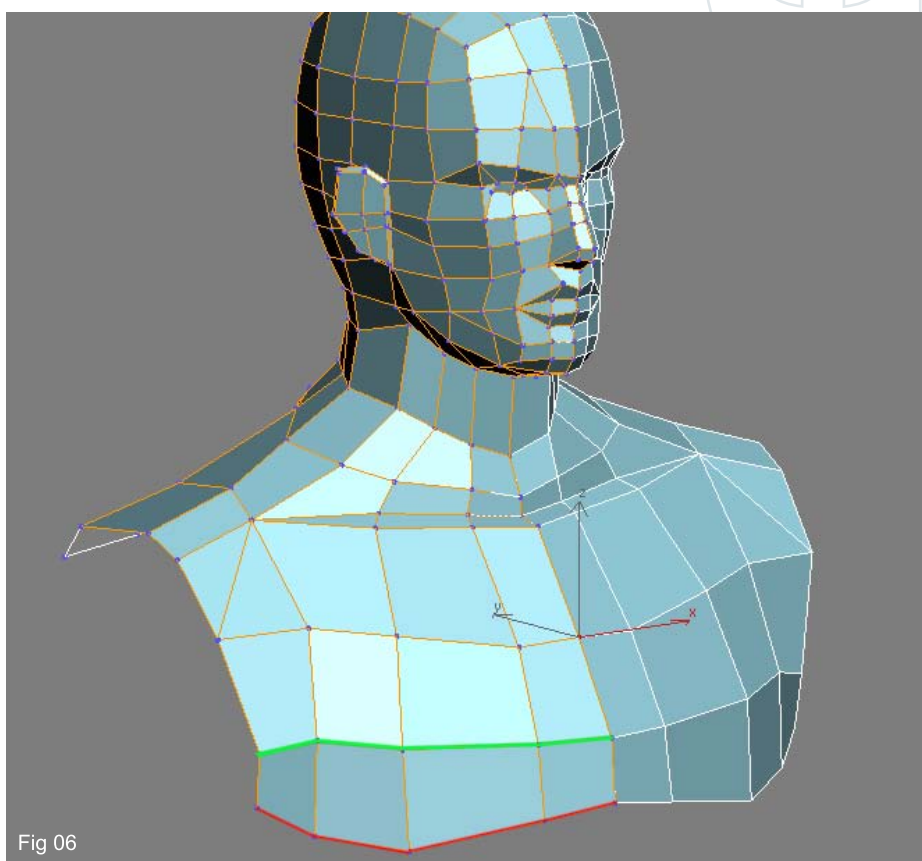


Fig 06



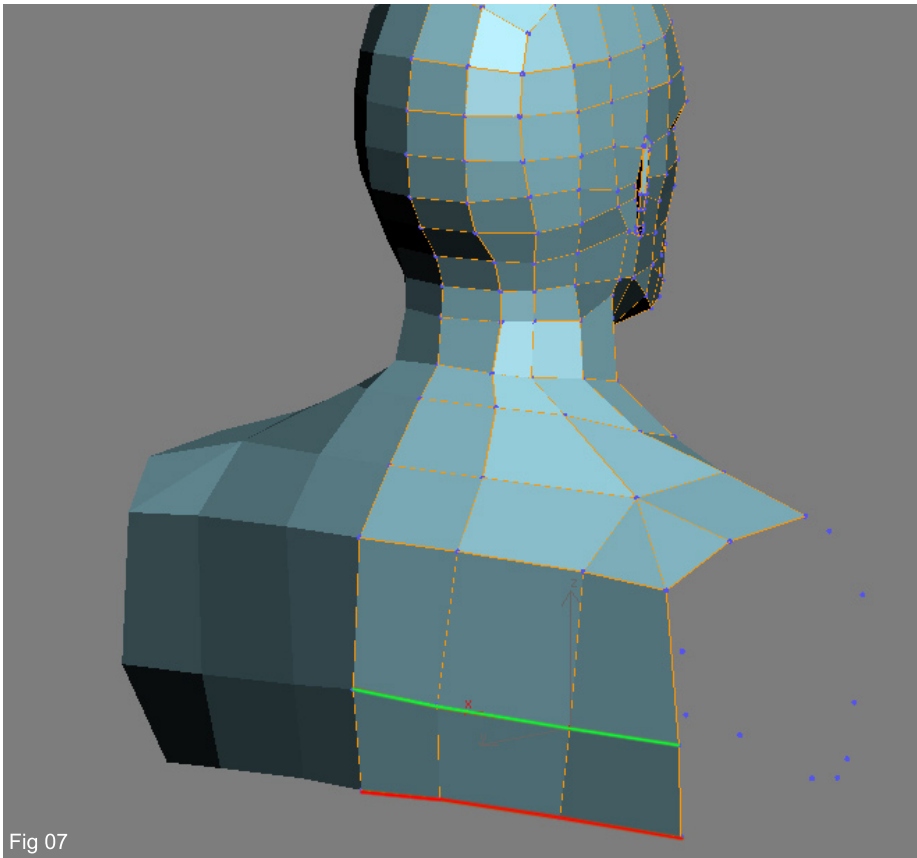


Fig 07

7. We can do the same thing to also form the upper back (Fig07).

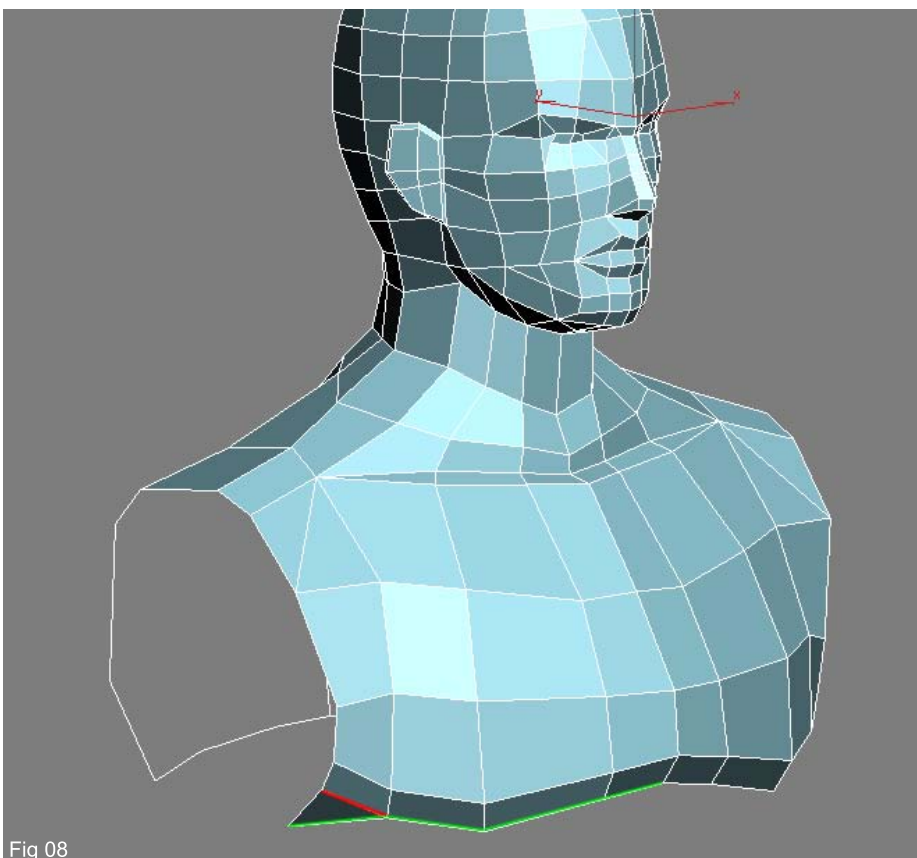


Fig 08

8. Back to the front now ! Grab that bottom row of edges under the chest and copy these downwards once more but this time pull them inward to form the lower part of the chest (Fig08). Also add in a small cut indicated by the red line.



9. If we look at Fig09 we can begin to see the shape that the upper arm will assume when it eventually materializes from the hole. Before we close the bottom edge copy the edges highlighted in green to start off the abdomen and lower back areas.

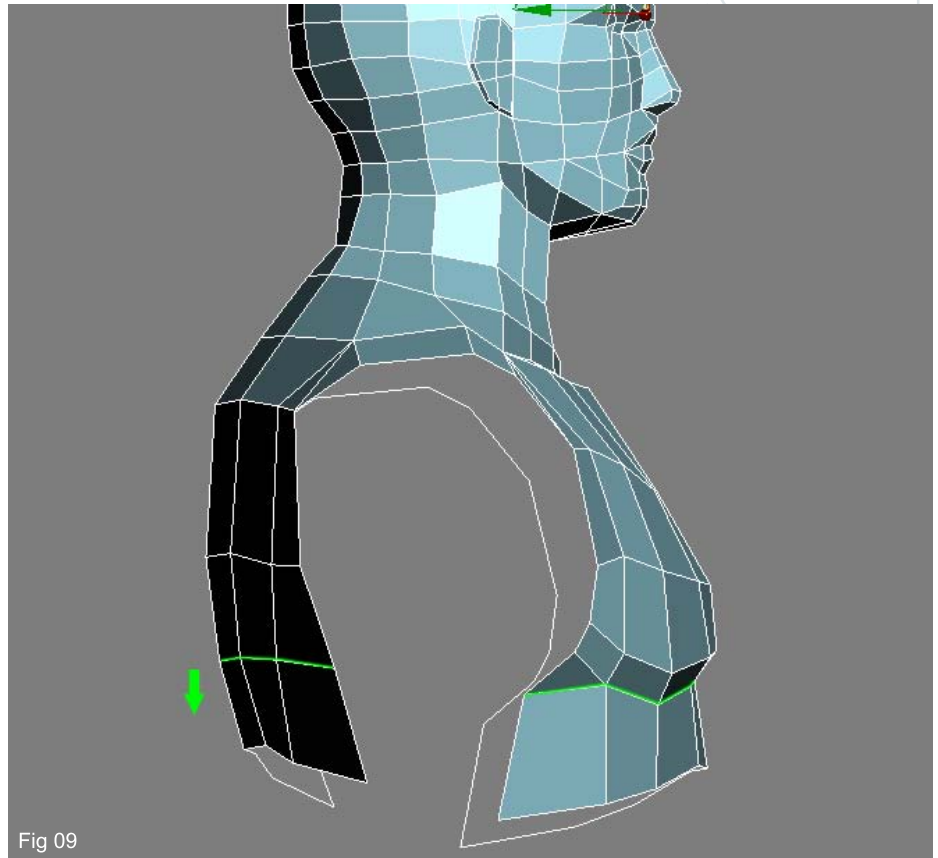


Fig 09

10. With this done it is time to seal the bottom of the arm area. In sub-object poly mode create a poly that bridges the gap and once this is done add a "Cut" and pull the new vert down slightly to help form a better shape under the arm (green line in Fig10).

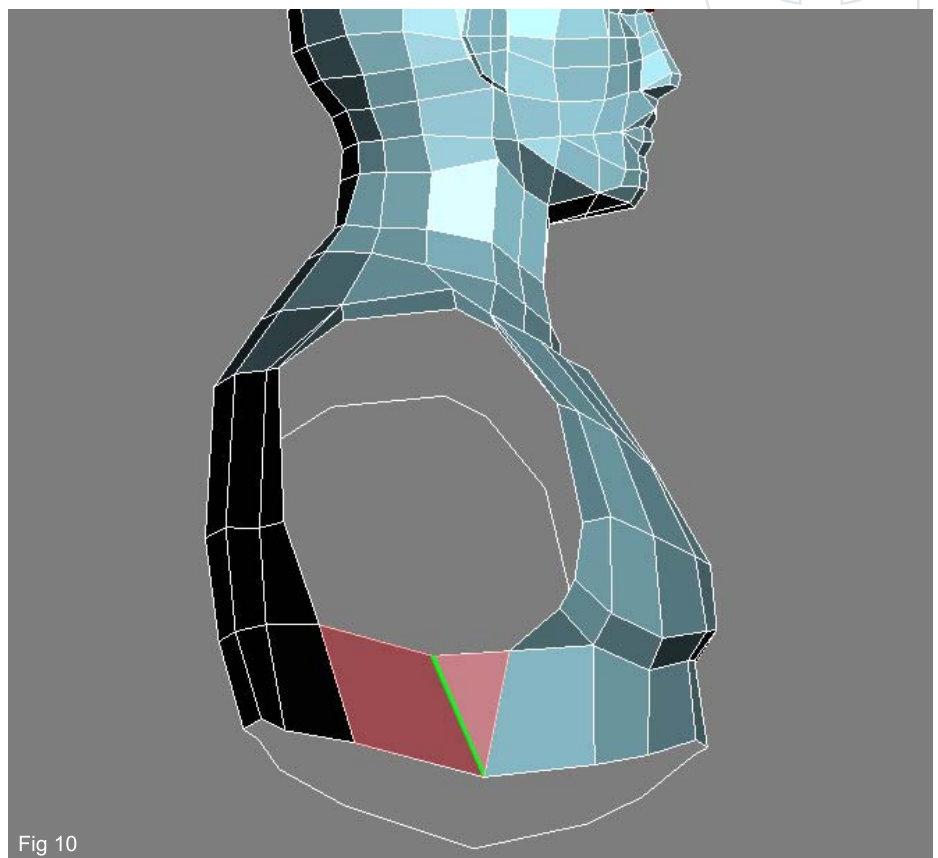


Fig 10



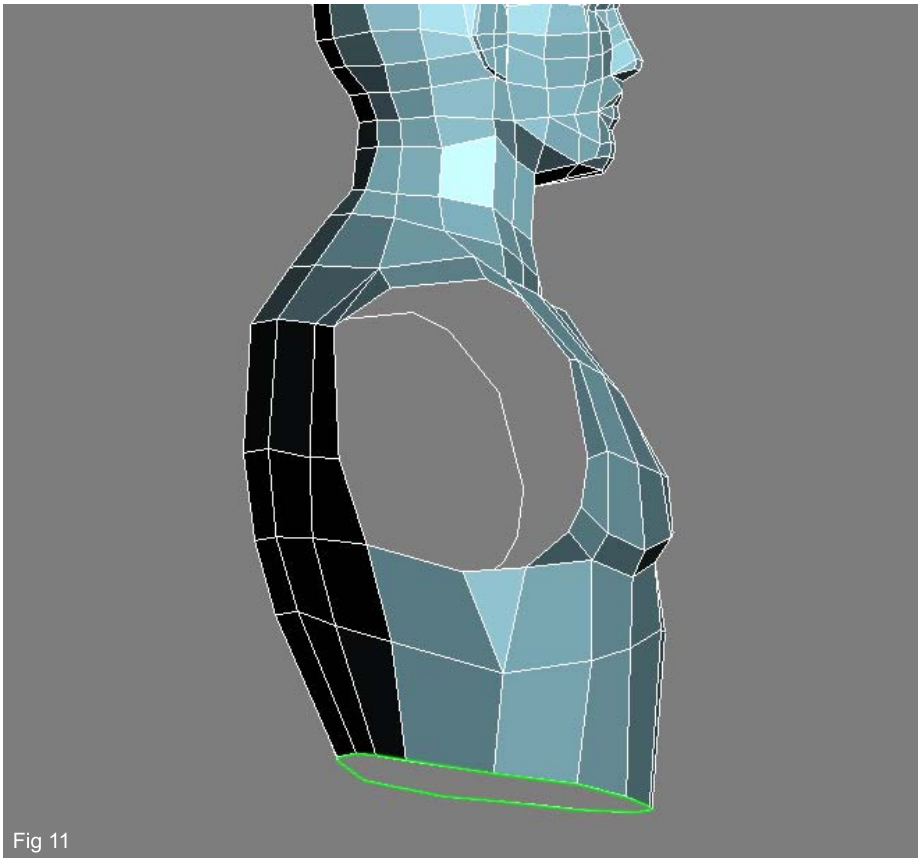


Fig 11

11. We now have a complete upper torso with a hole ready to build our arm. All that we need to do now is extend it downwards to form the lower back, abdomen and pelvic area. Once again grab the lower ring of edges and copy them downwards (green line in Fig11).

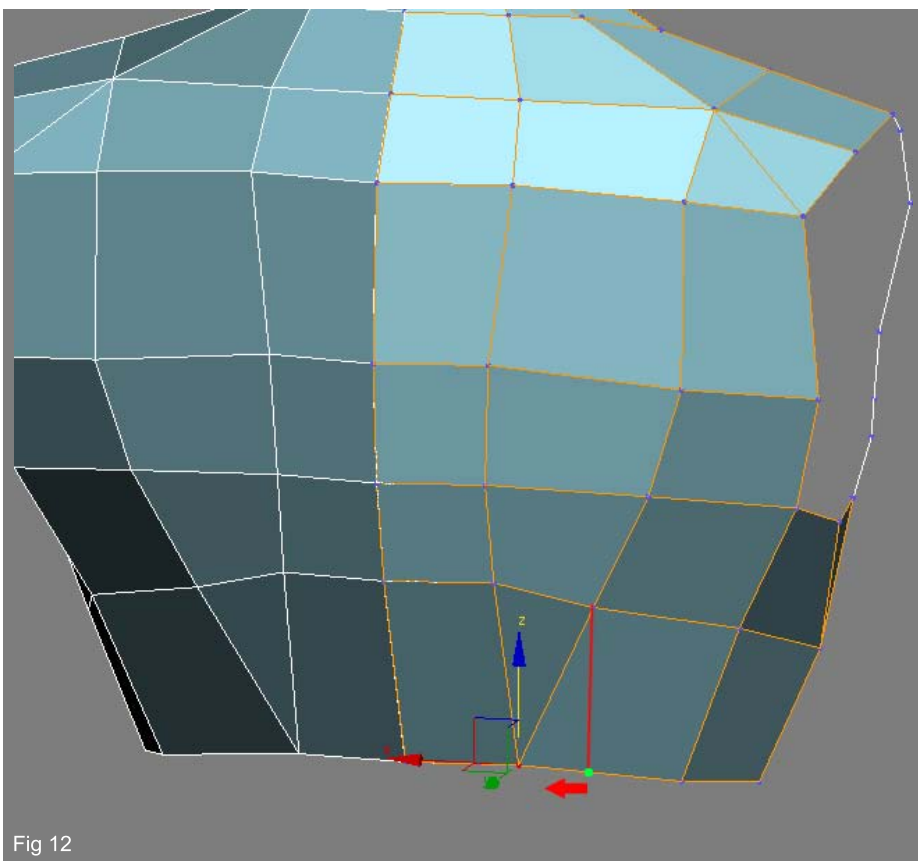


Fig 12

12. To help shape the muscle form on the back you could weld the vert shown in green in Fig12 to the one to its left. This will form a triangle and follow the shape of the muscles running downwards from the shoulder blades.



13. Now select the bottom row of edges once more and copy these downwards by quite a way (Fig13).

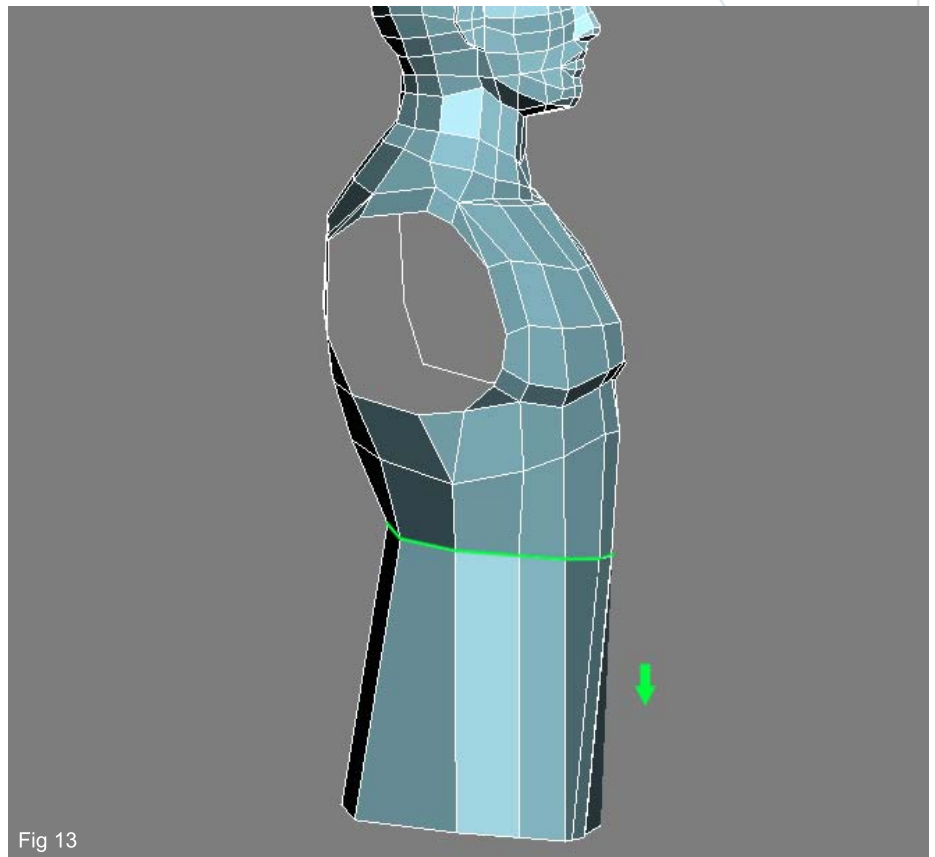


Fig 13

14. What we will do next is add a few subdivisions across the new section of poly's we have just made. So in "Edge" mode select any of the vertical edges (green line in Fig14) and click on "Ring/Connect" and add in three segments as shown in the dialogue box.

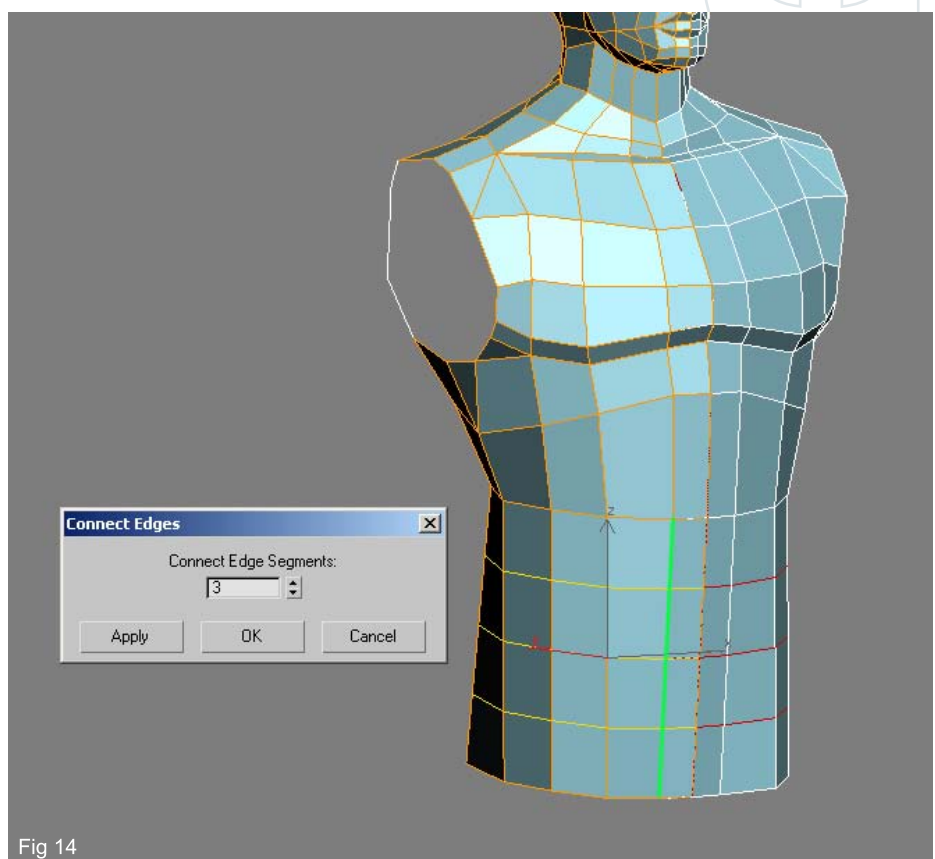


Fig 14



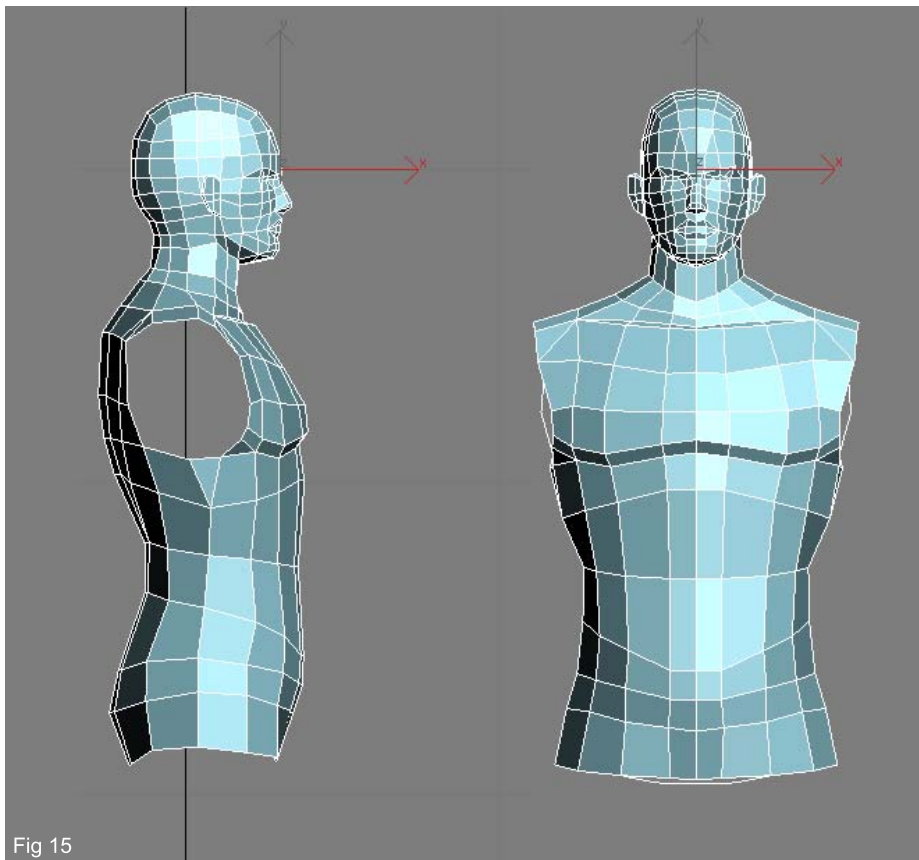


Fig 15

15. The next thing to do is to simply manipulate the newly created verts into positions that form the shape of the lower torso and top of the buttocks (Fig15). It is best to do this in the same way we began moulding the cube into a rough head shape, ie. move the verts first in the front view and then in the profile view before tweaking them in the User or Perspective viewports. The illustration shows a profile and front view which will give you a good idea about the positions of the verts.

16. The last thing to do before we start to make the arms and legs is add a small cut across the base of the buttocks in order that we have a little more geometry to deform when the character is eventually animated. This will help smooth the curve of the leg when it is extended (Fig16). You can see in the illustration that the added cut (in green) has helped the curvature when the legs are extended, evident in the screen shots above. You will also notice that I have added another cut (in red) above to help the creasing in this area. It is always worth remembering that it helps to have more detail around all joints as these polys are subject to more stretching and movement. In the case of the red cut, I have created two triangles on the side of the leg as this pattern will be used around the knee (the reason for which we will see in the next tutorial) but you could in fact have just made a cut to the lower vert creating only a single triangle. Configuring poly's around joints is often determined by the types of animation required and it is sometimes worth attaching a skeleton to the model before it is finished in order to test the mesh.

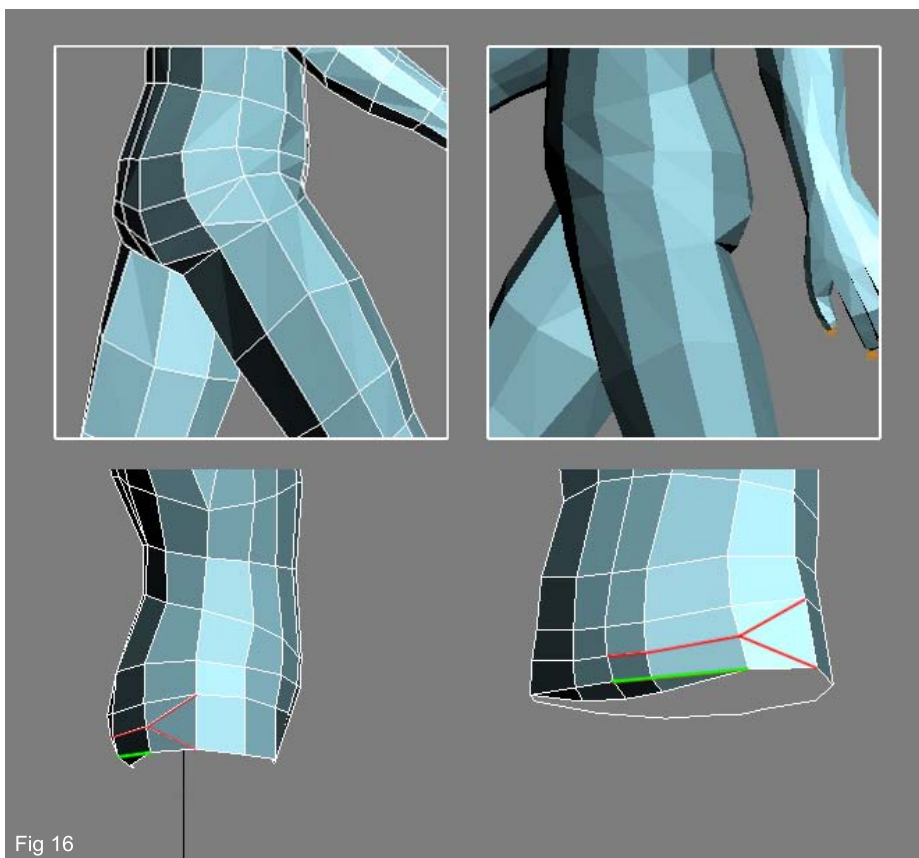
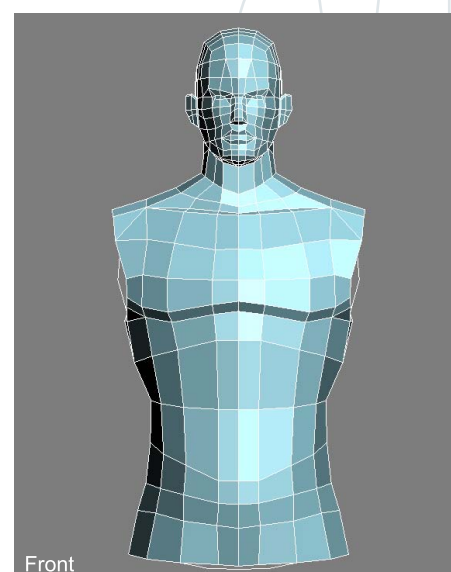
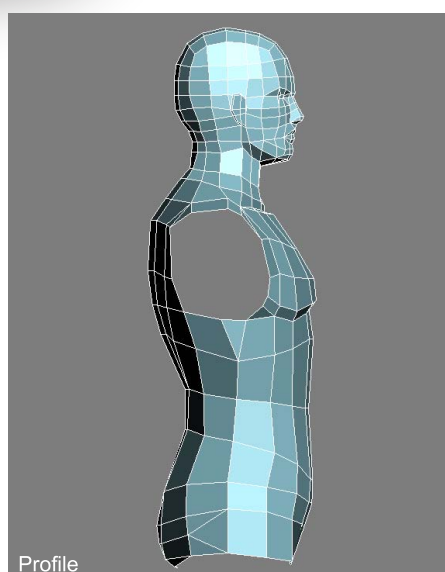
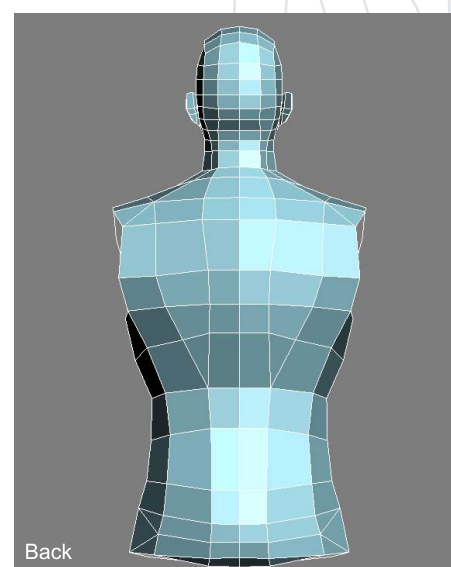
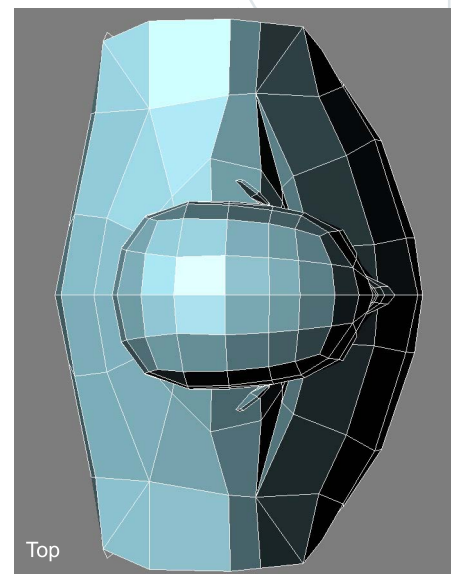
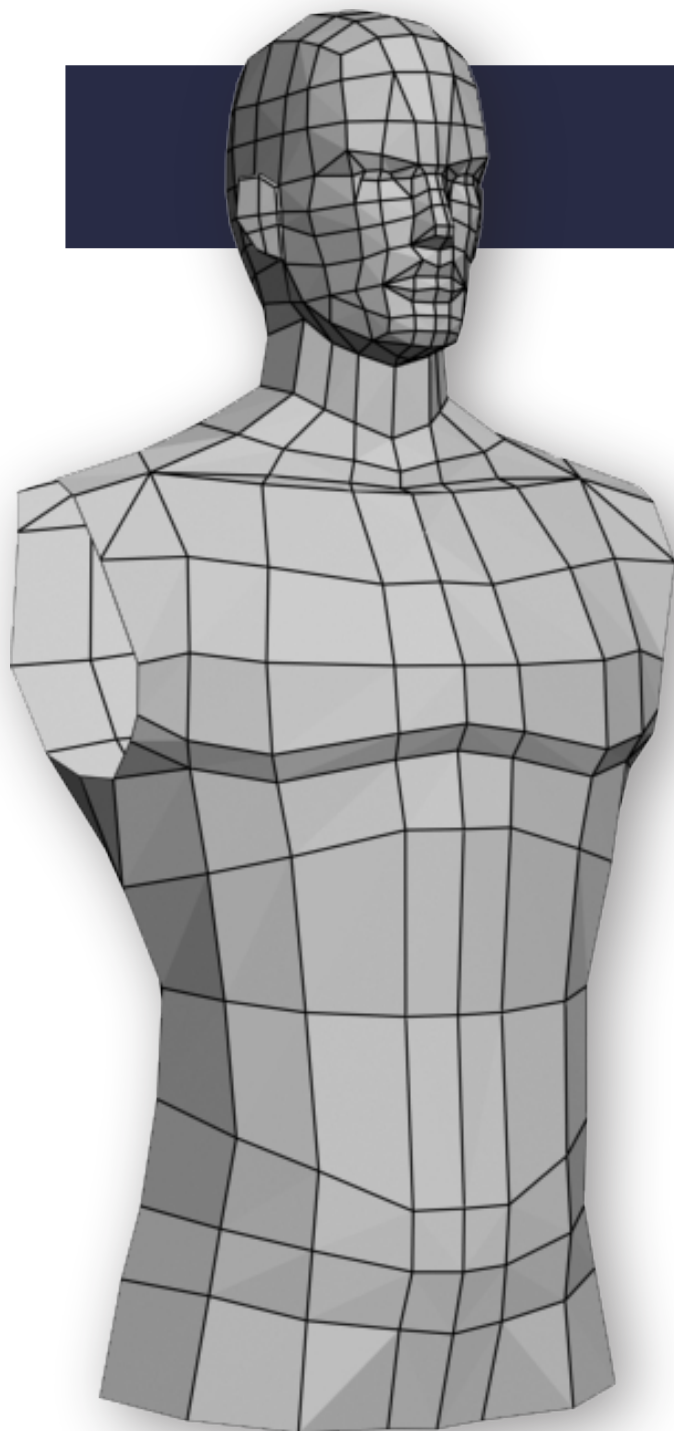


Fig 16

This concludes the torso section of the tutorial and next month we will go on to build the arms and legs to complete the body.





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The 'Swordmaster'

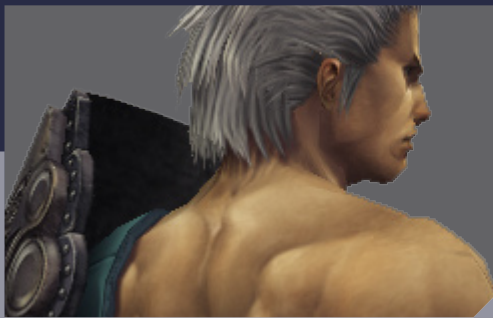
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Swordmaster



## THE SWORDMASTER



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## PART 02 MODELLING THE TORSO

### INTRODUCTION:

Welcome to the second part of ongoing tutorial which will run over several months and provide a step by step guide to building a low poly character based upon a model by Seong-Wha Jeong. In this installment we shall start with the head model covered in last month's edition and build upon the mesh to create a torso.

1. Open the file of the head and begin by selecting the bottom row of edges as shown in Fig01. Extrude the edges, then right click and choose Extrude from the menu. Remember that we still have the Symmetry on the object so check that all middle points are on the coordinate  $X = 0:00$ .

2. When you have done, adjust the points to obtain a nice neck shape. Make another extrusion of the edges to form the top of the shoulders (Fig02). You can see in the illustration that the small picture shows the positions that the new verts have taken up.

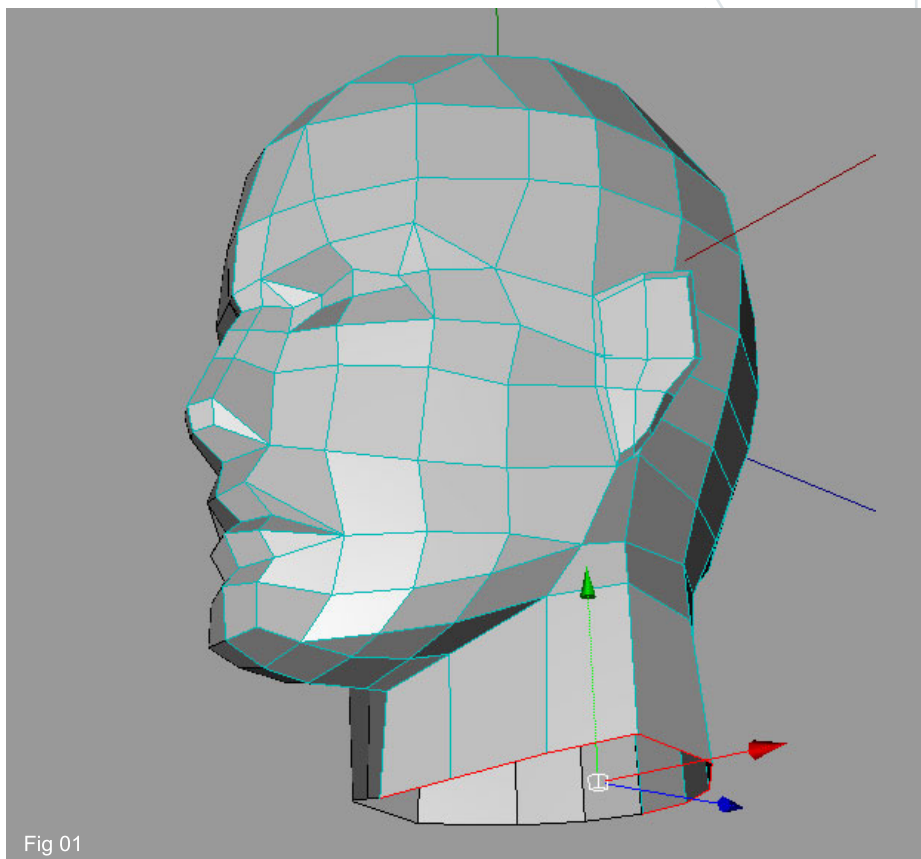


Fig 01

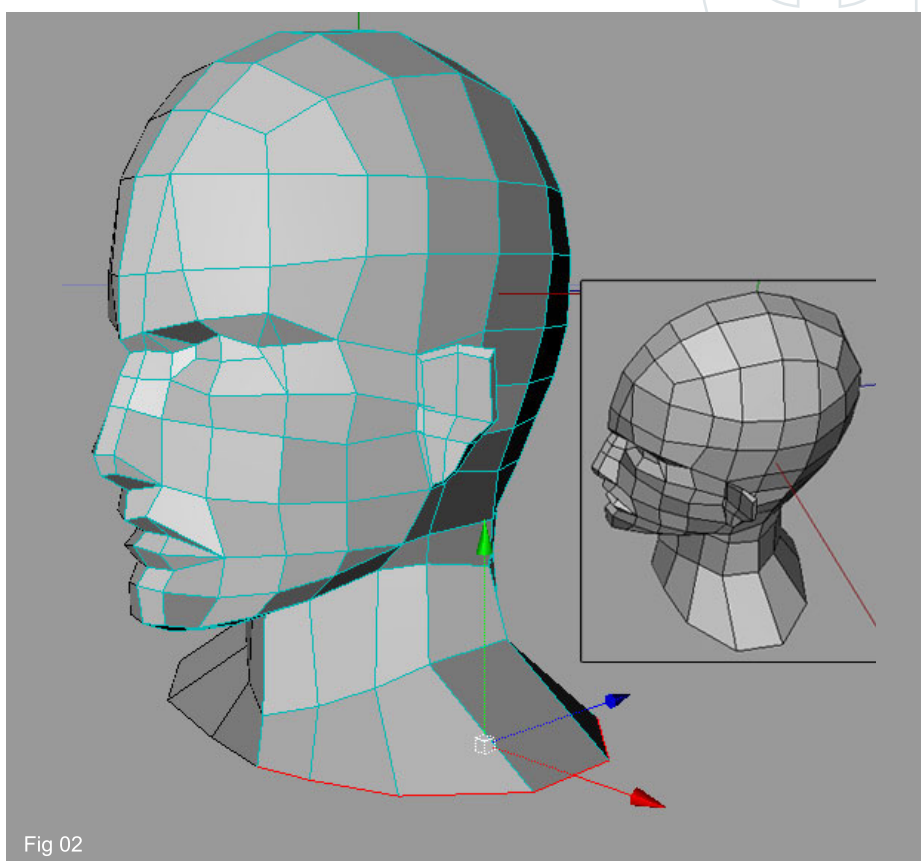


Fig 02



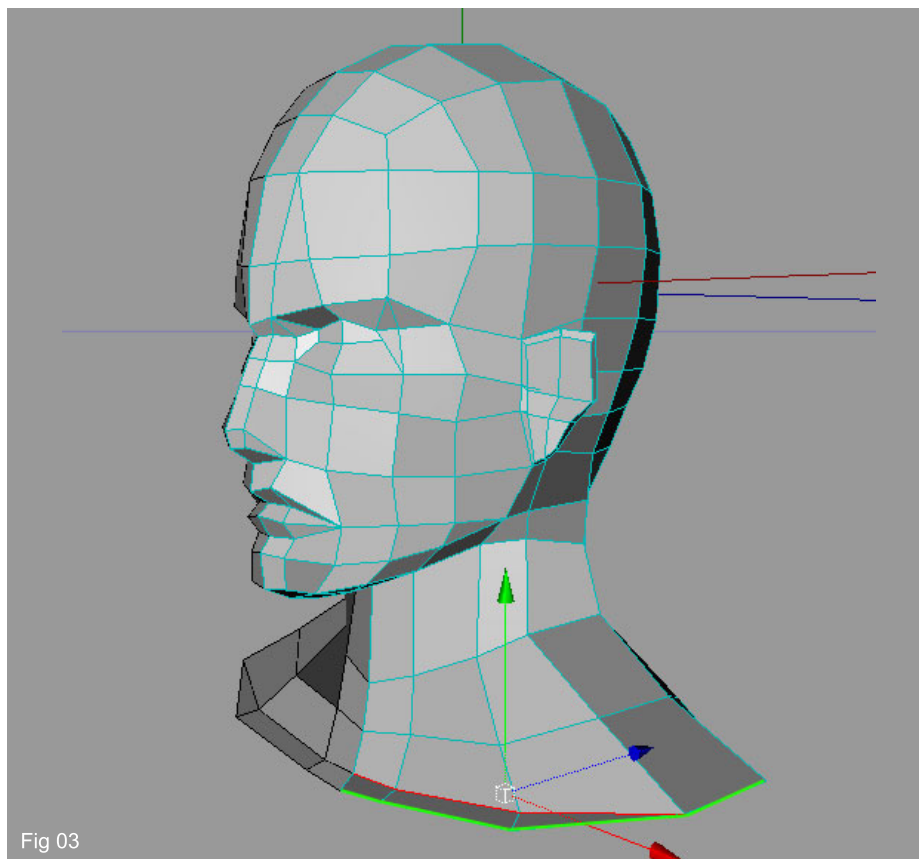


Fig 03

3. Now make a cut across the front three poly's to form the clavicle as seen by the red line in Fig03 using the same technique as before - selecting the edges and apply the "Edge Cut" tool or connecting the edges by "Knife" tool.

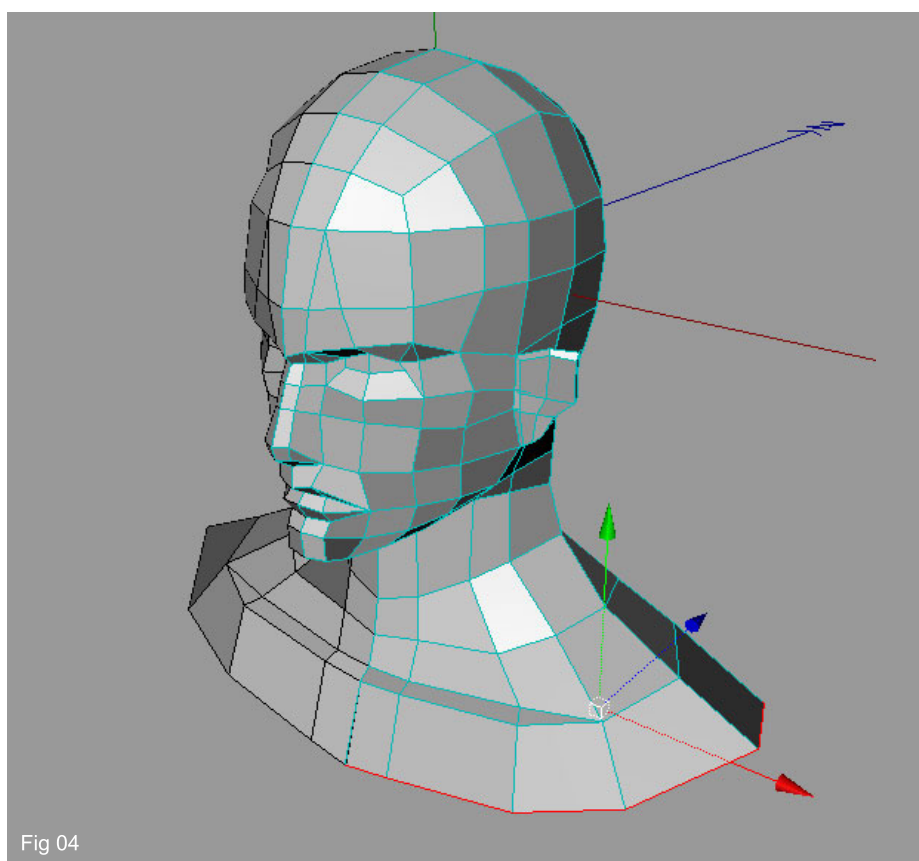


Fig 04

4. Now once again select this bottom row of edges and extrude them and re-arrange the new vertexes to form a better shape. (Fig04). Remember that whenever you add more detail you should move the new verts into suitable positions before adding any new edges.



5. The shoulder area is mostly done by simply extruding the edges and adjusting the new verts. Now it's time to start to form the top of the arm area. We need to make two new cuts on the front and back poly's that form the outer edge like shown (Fig05). You will notice that these new edges are represented by the first cut in green and the second in red, the new verts are then moved.

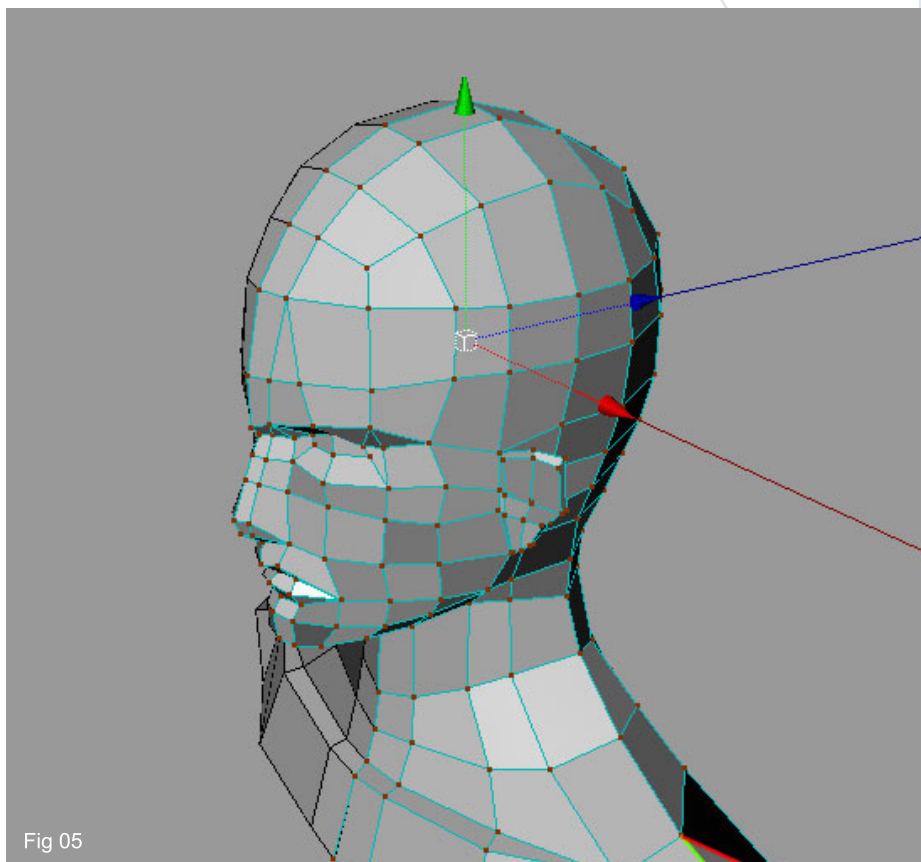


Fig 05

6. Now select the bottom row of edges on the front of the torso and make two extrusions like shown (Fig06). Adjust the new verts each time you make an extrusion.

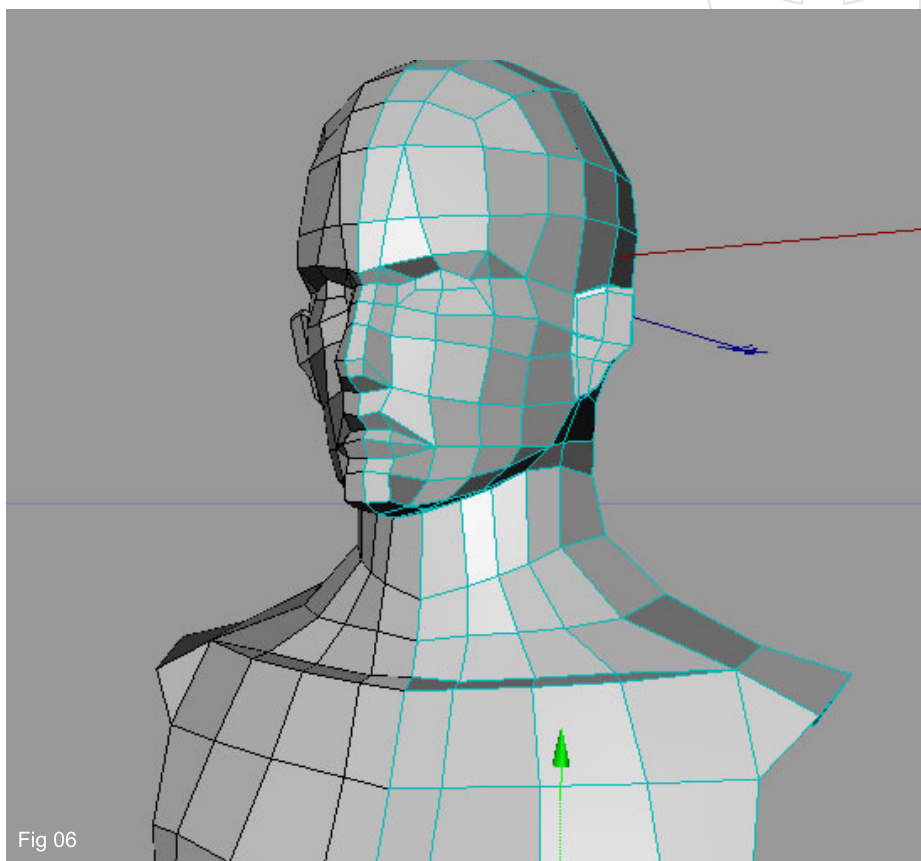


Fig 06



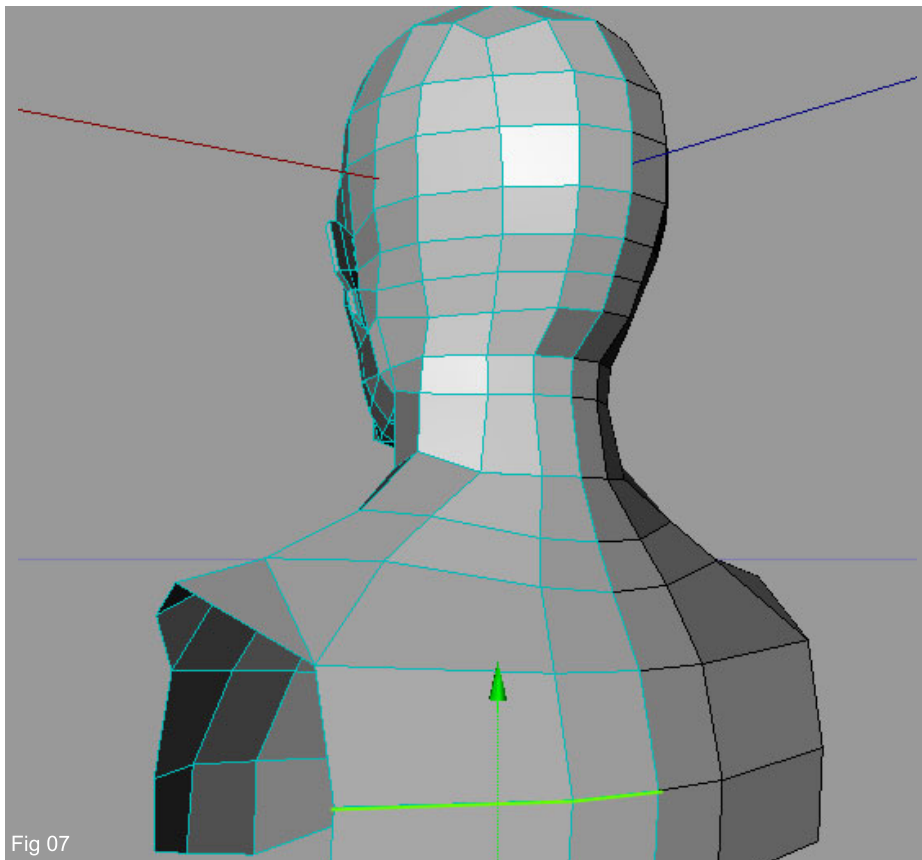


Fig 07

7. Do the same thing to also form upper back (Fig07).

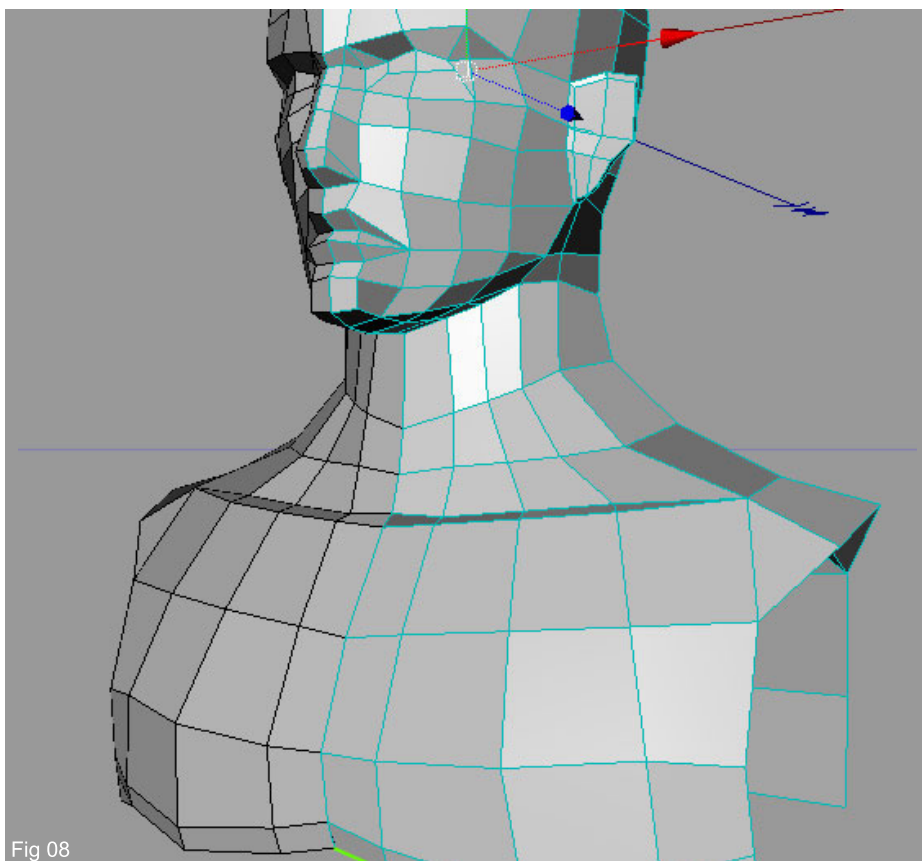


Fig 08

8. On the front, extrude the edges like shown (Fig08) and pull them inwards to form the lower part of the chest. Also add in a small cut indicated by the red line.



9. Another extrusion to start off the abdomen and lower back areas. (Fig09)

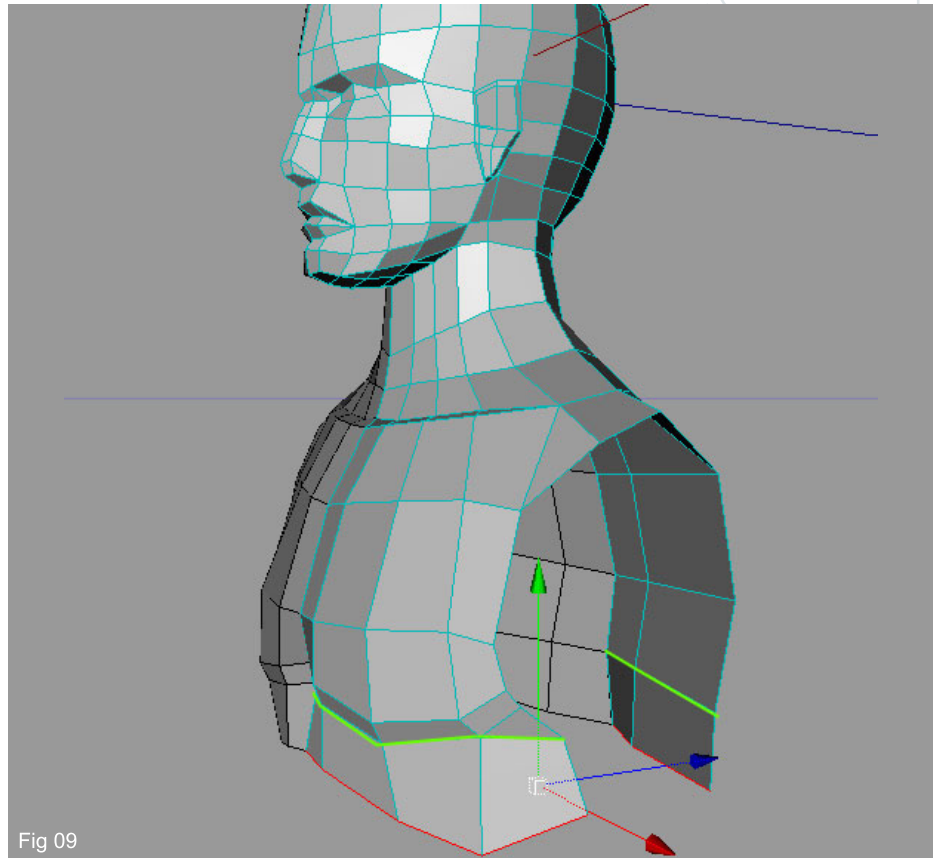


Fig 09

10. In points mode, create the polygon indicated by green lines (Fig10). Then add a cut like shown.

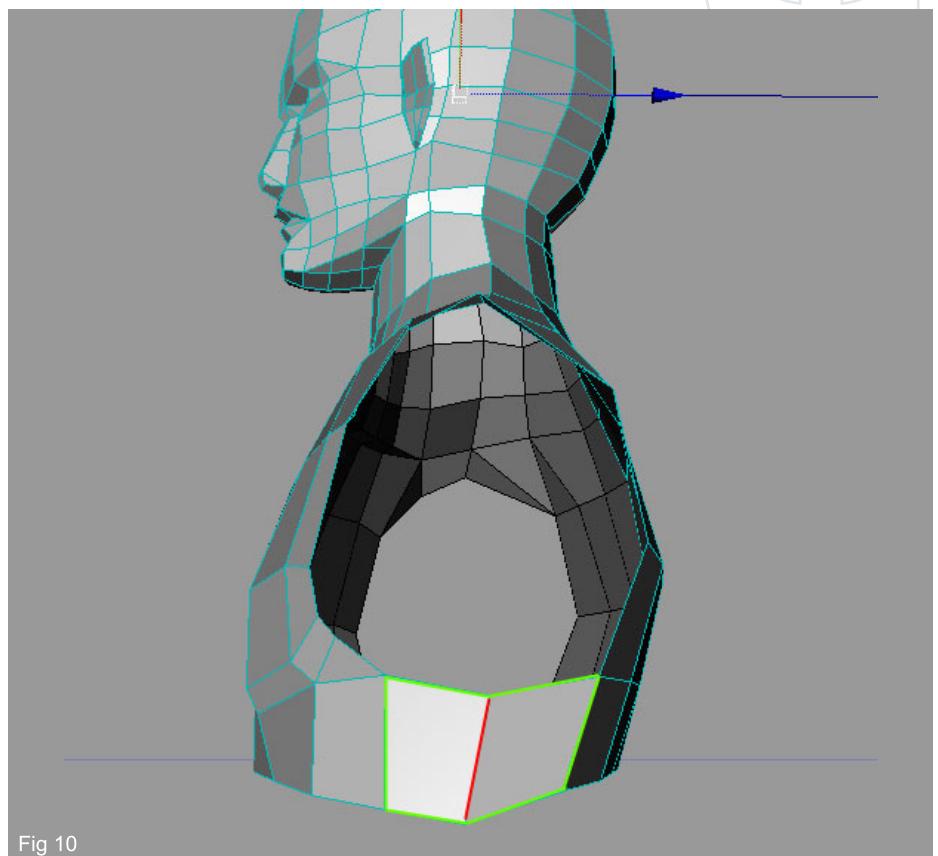


Fig 10



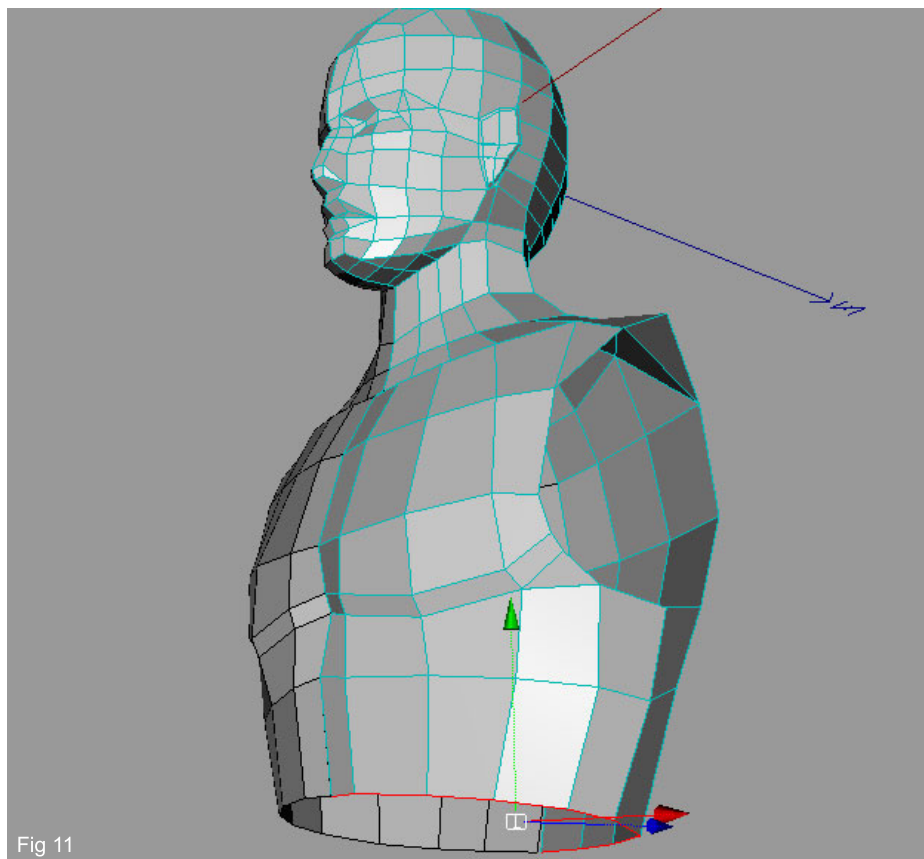


Fig 11

11. The upper torso is now completed and we have also a hole ready to build our arm. Make an extrusion, like shown like shown in the image to form the lower back, abdomen and pelvic area (Fig11).

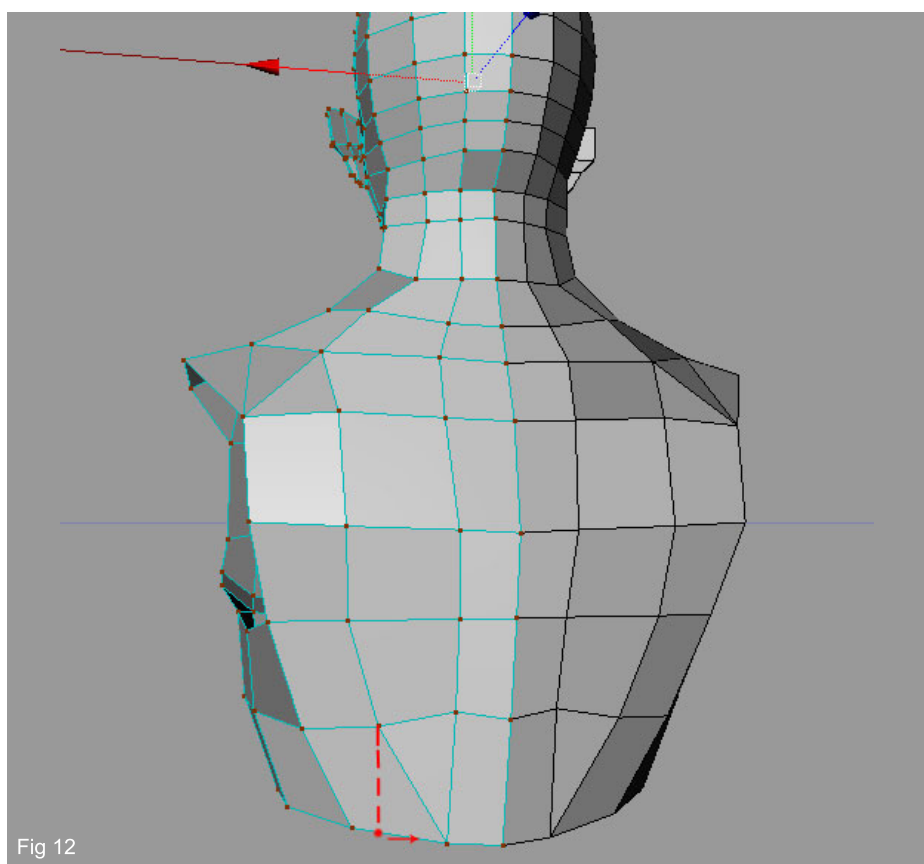


Fig 12

12. To help shape the muscle form on the back, you need to weld the vertex shown in red (Fig12) to the one to its left. This will form a triangle and follow the shape of the muscles running downwards from the shoulder blades.



13. Select now the bottom row edges and extrude them once more (Fig13).

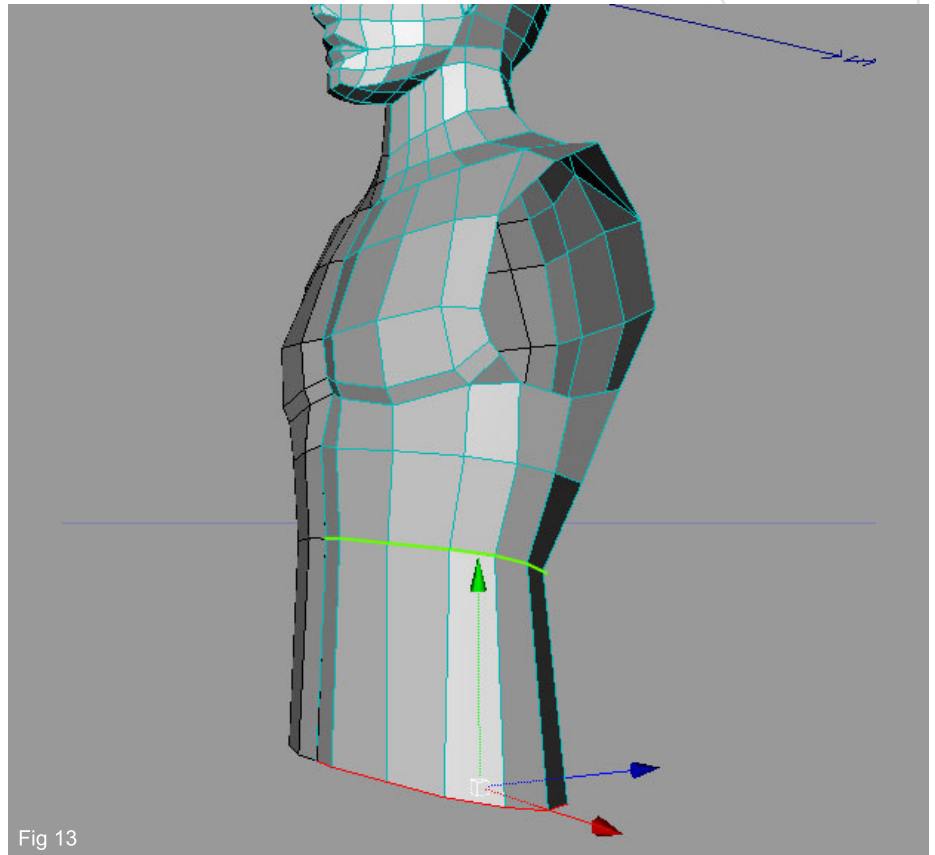


Fig 13

14. Add three cuts to the new section of poly's we have just made. Use the Ring Selection tool to select the edges then use Edge Cut tool to add three segments like shown (Fig14).

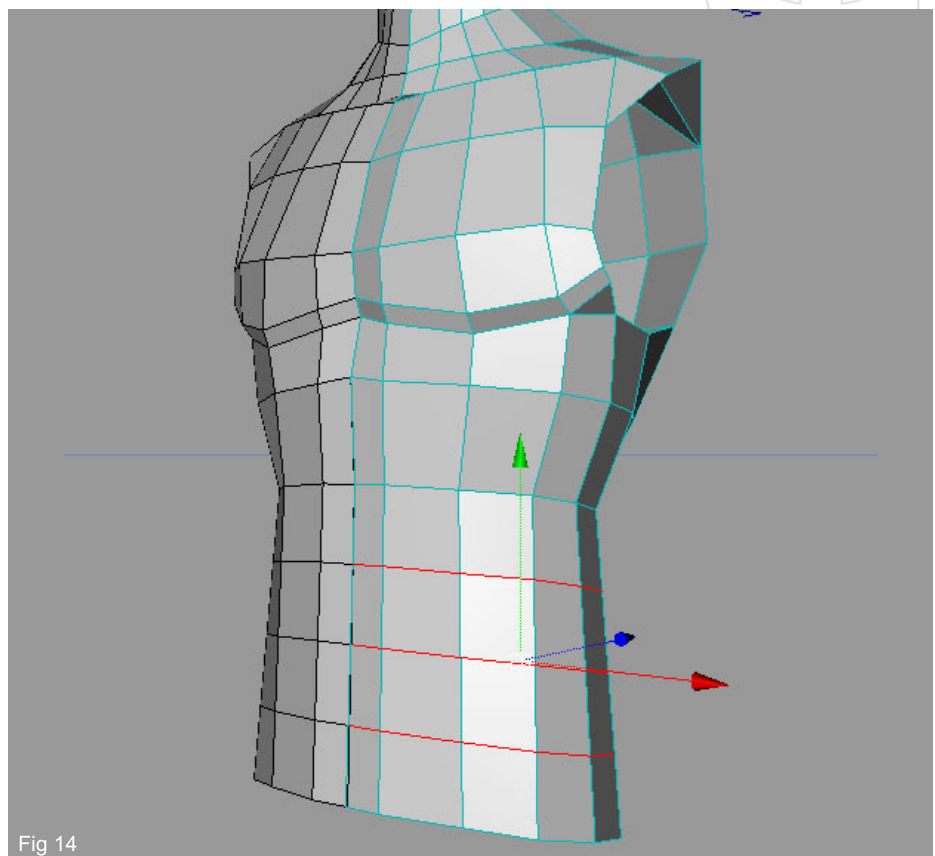


Fig 14



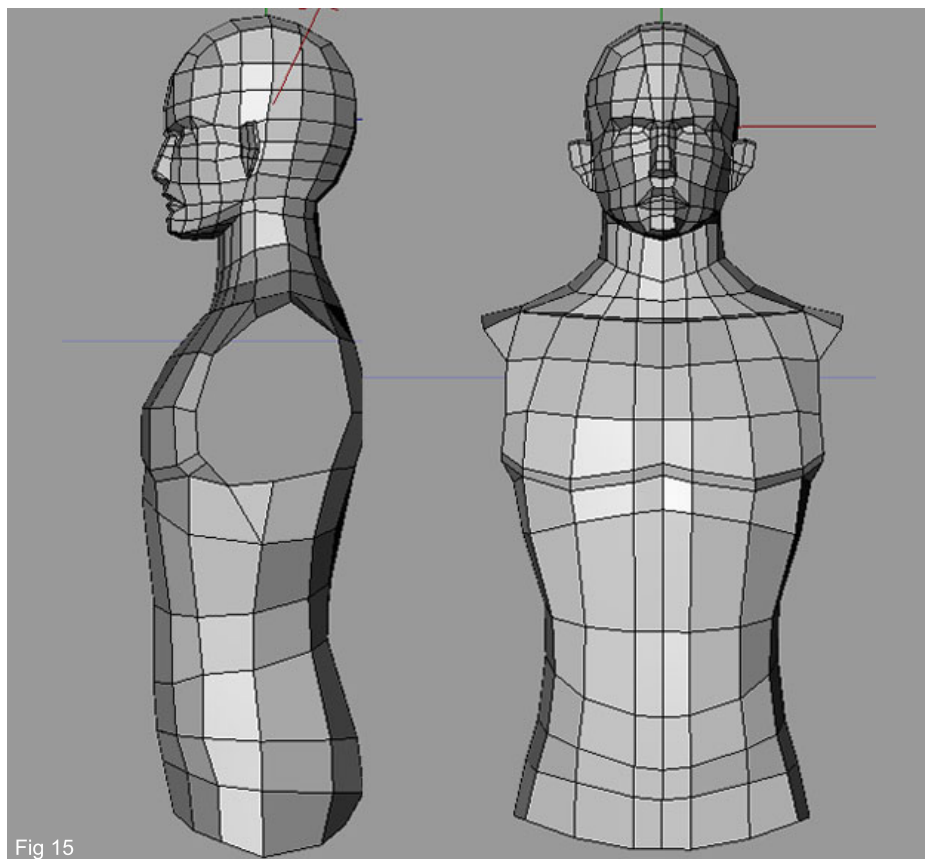


Fig 15

15. Now manipulate the new vertexes into positions that form the shape of the lower torso and top of the buttocks (Fig 15). Move the verts first in the front view and then in the profile view, etc... The illustration shows the profile and front view.

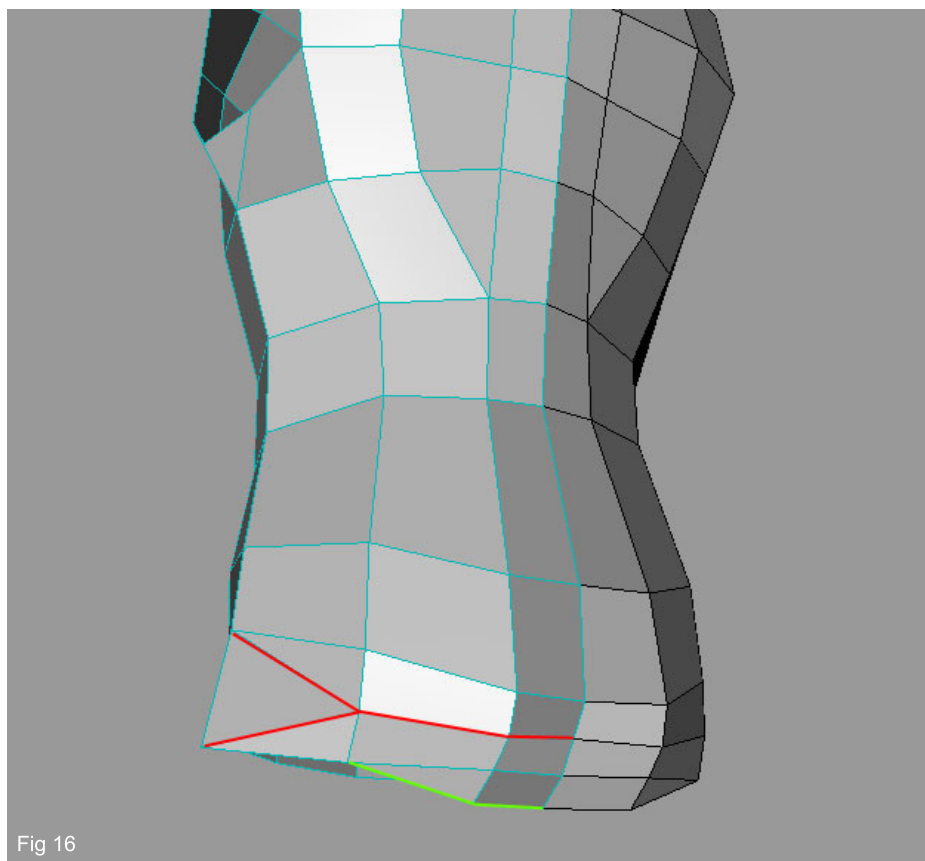
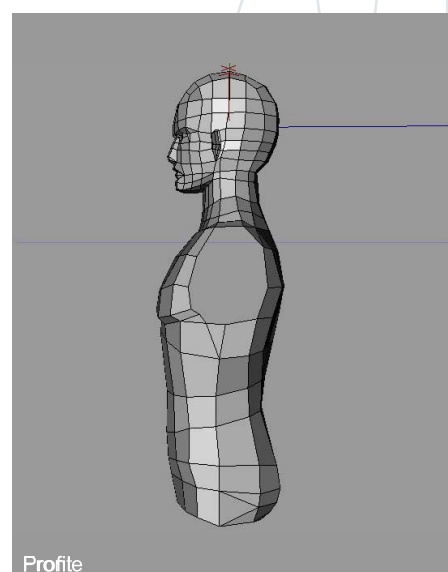
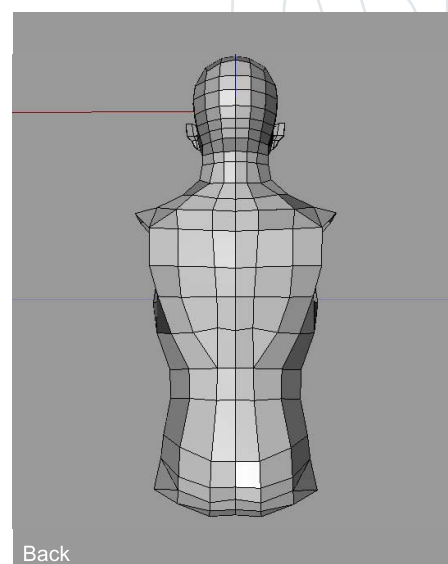
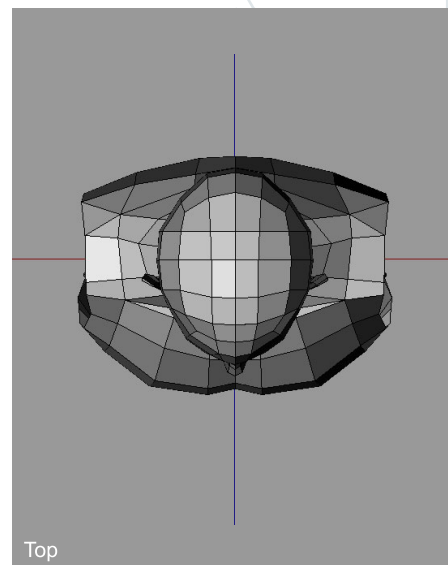
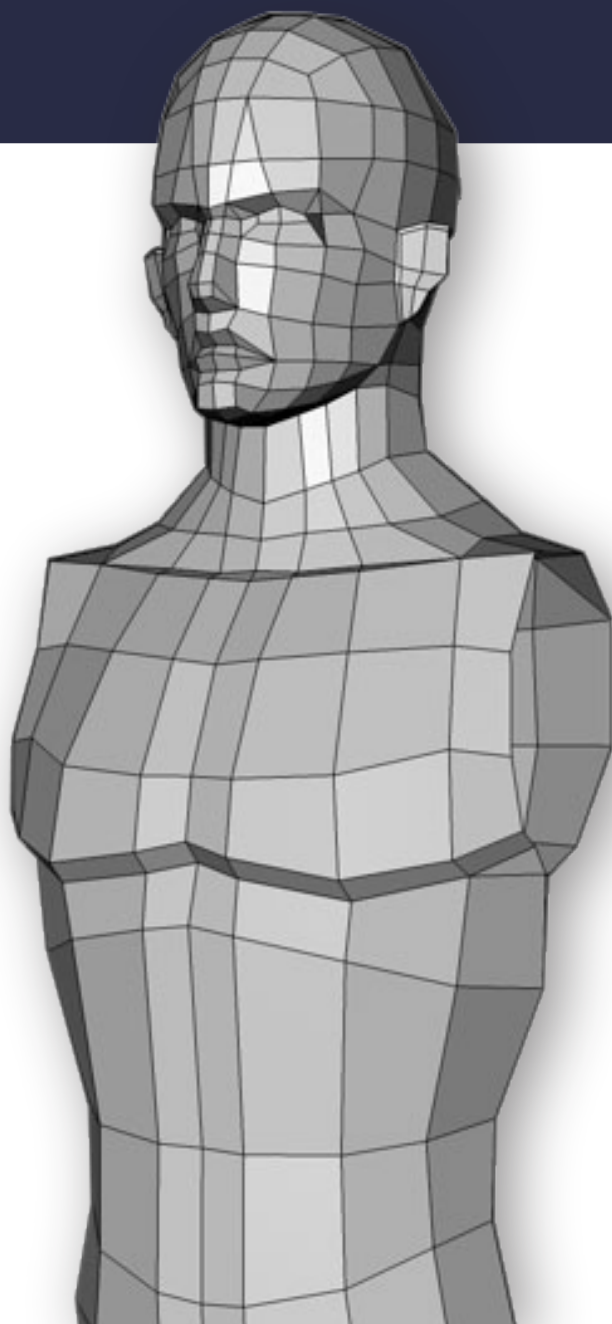


Fig 16

16. The last thing to do before we start to make the arms and legs is add a cut across the base of the buttocks so we will have a little more geometry to deform when the character is eventually animated. After the cut, extrude the two edges like shown (Fig 16).





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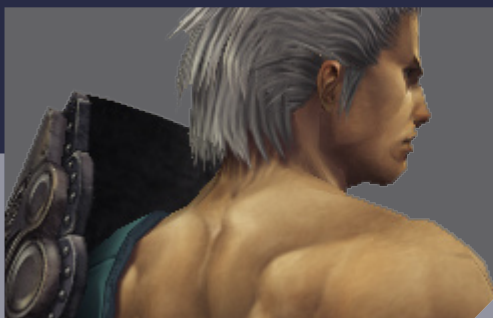
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The 'Swordmaster'  
character was originally created by  
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Swordmaster



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## PART 2 MODELLING THE TORSO

### INTRODUCTION

Welcome to the second part of the Swordmaster tutorial. This month we will start from the head model built in the last month's tutorial and continue building a torso for the Swordmaster model.

1. Start by, selecting the lowest points of the head model and use the Extender plus tool (just hit 'e') to extend once. Use the Move tool ('t') to move the new points downward along the Y axis. Holding Ctrl key while you move, will lock the movement to one axis, so the points won't move on X or Z axis. Using the Drag tool (Ctrl+t) and Symmetry mode on (Shift+y), adjust the points so they are forming more of a natural neck shape. If you have polygons at the bottom of the head, feel free to select and delete them as they won't be needed in the modelling process (Fig01).

2. Repeat the same step as described above only this time move the side points more outward to form the top of the shoulders (Fig02).

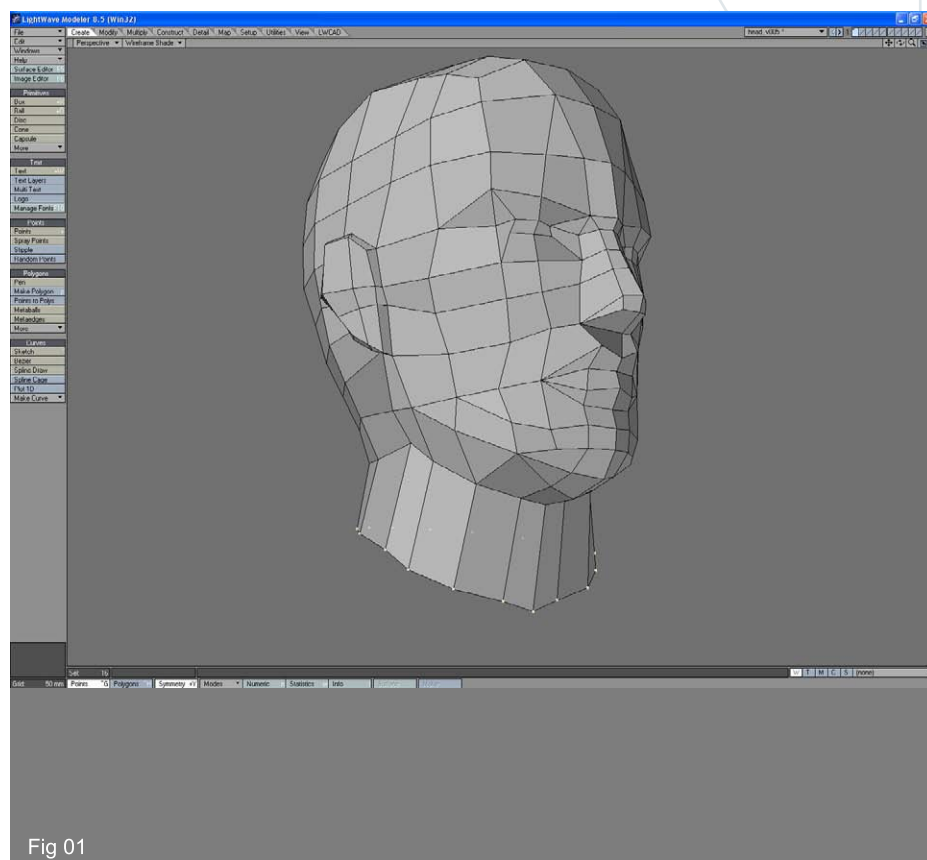


Fig 01

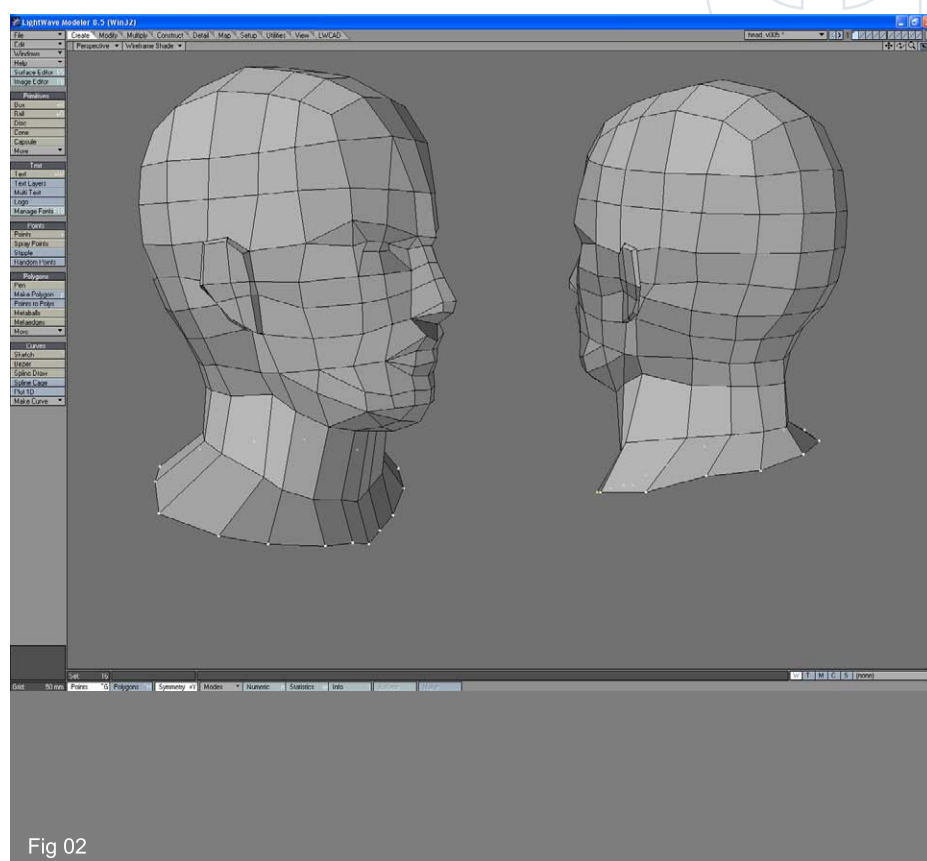


Fig 02



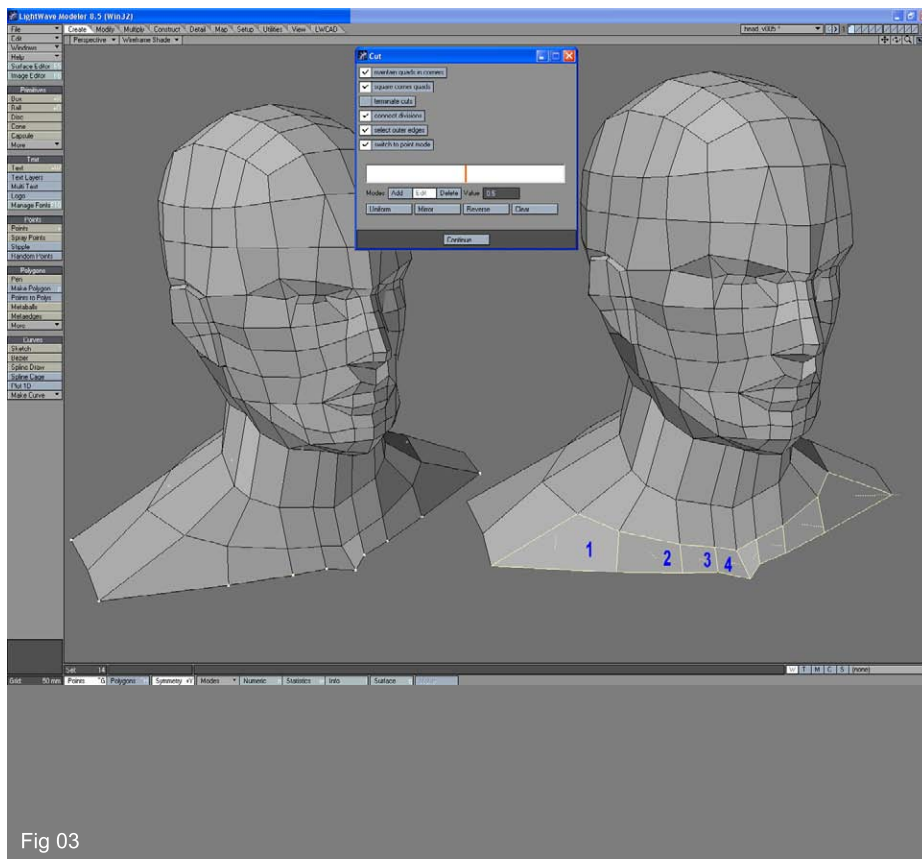


Fig 03

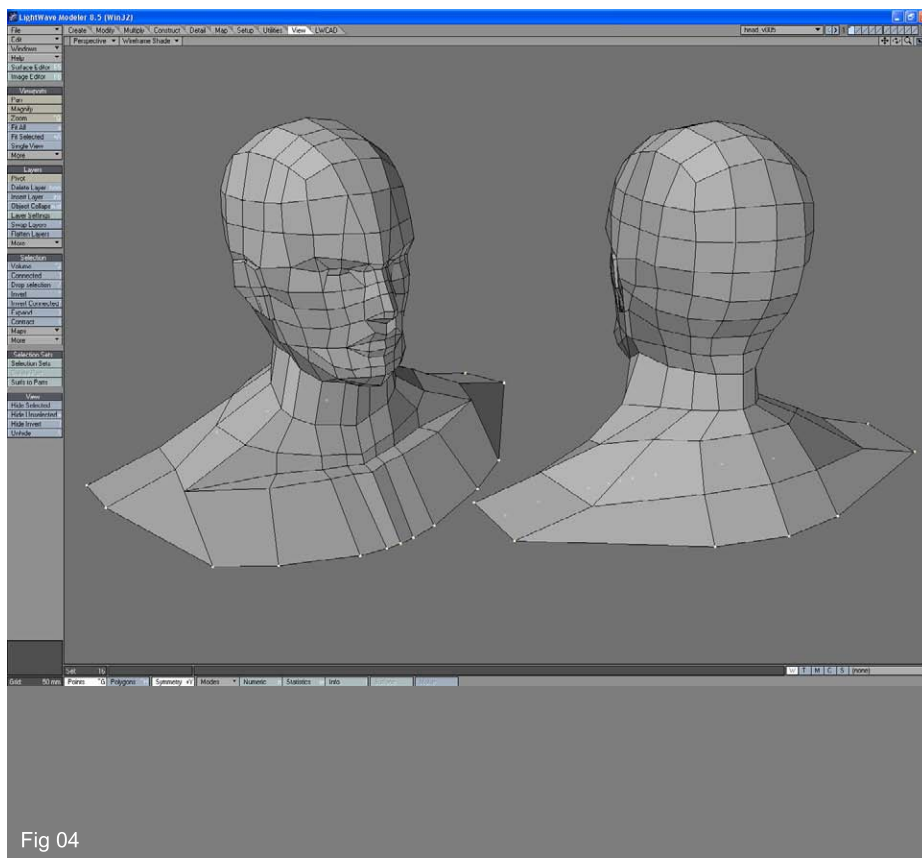


Fig 04

3. Extend once more like in previous steps and drag to adjust the shape of the model. Now select the polygons in order shown in the image (make sure Symmetry mode is still on) and apply the Cut tool from Multiply-Subdivide. Leave it at its default values and hit ok. Weld the two pairs of end points made by the Cut to avoid a 5-sided polygons at the shoulder tops (Fig03).

4. Once again select the lowest points of the model, extend them and readjust them. It is always a good idea to adjust points into suitable position before making another extrusion. It makes the modelling process much easier and faster (Fig04).



5. Select the polygon marked in the green colour (Fig05):

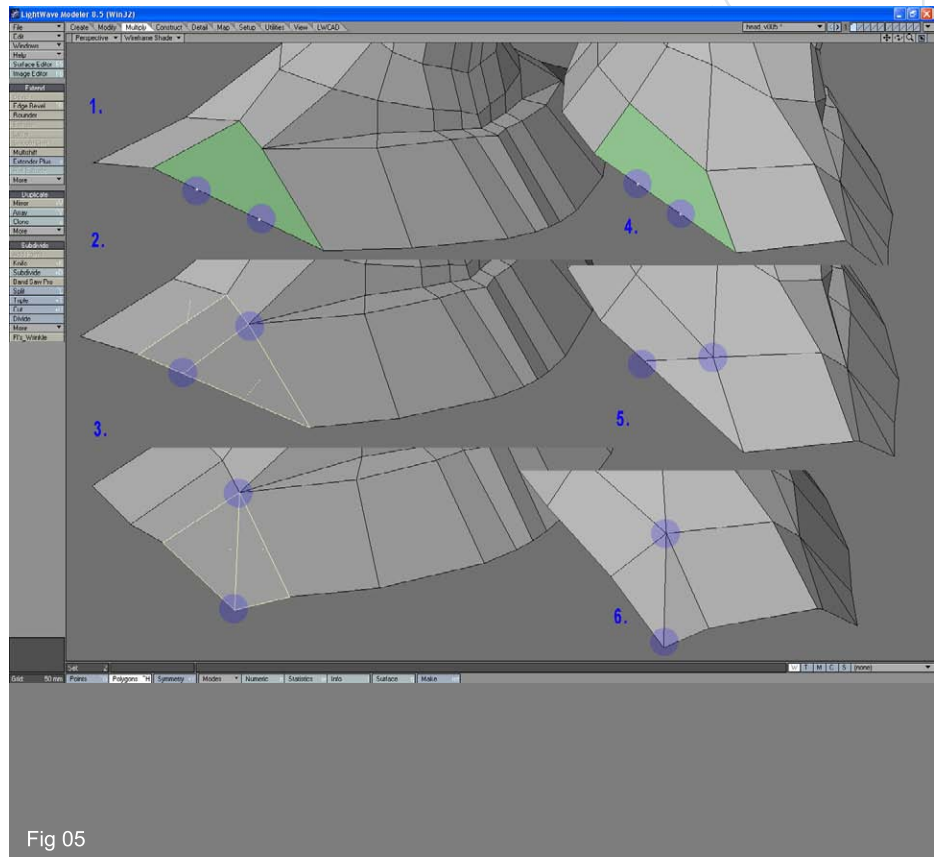
1: Use the Multiply-Subdivide-Add Points tool to add two new points in the places marked in blue.

2: In the polygon selection mode leave only this polygon selected, switch back to points selection mode and select two points marked blue and apply Multiply-Subdivide-Split tool. As you may notice the Split tool demands that both polygons for cutting and points where cut needs to go are selected.

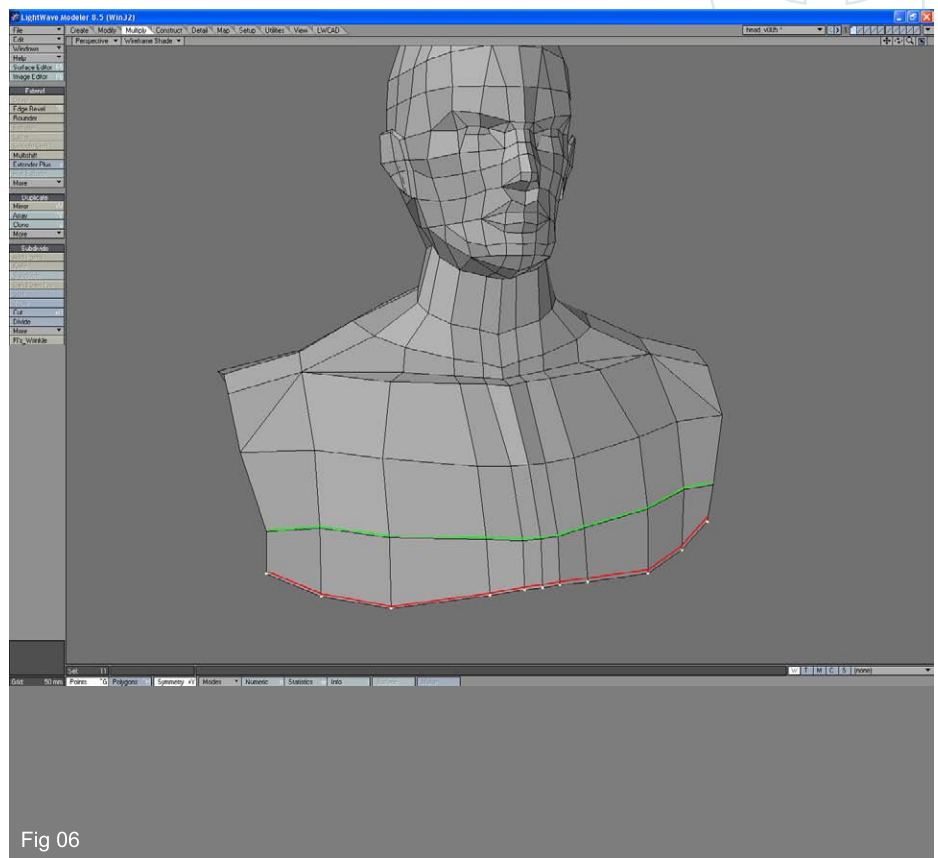
3: Repeat the same for the quad polygon below and split it into 2 triangles.

4 - 6: Repeat the same procedure for the polygon on the back side of the model.

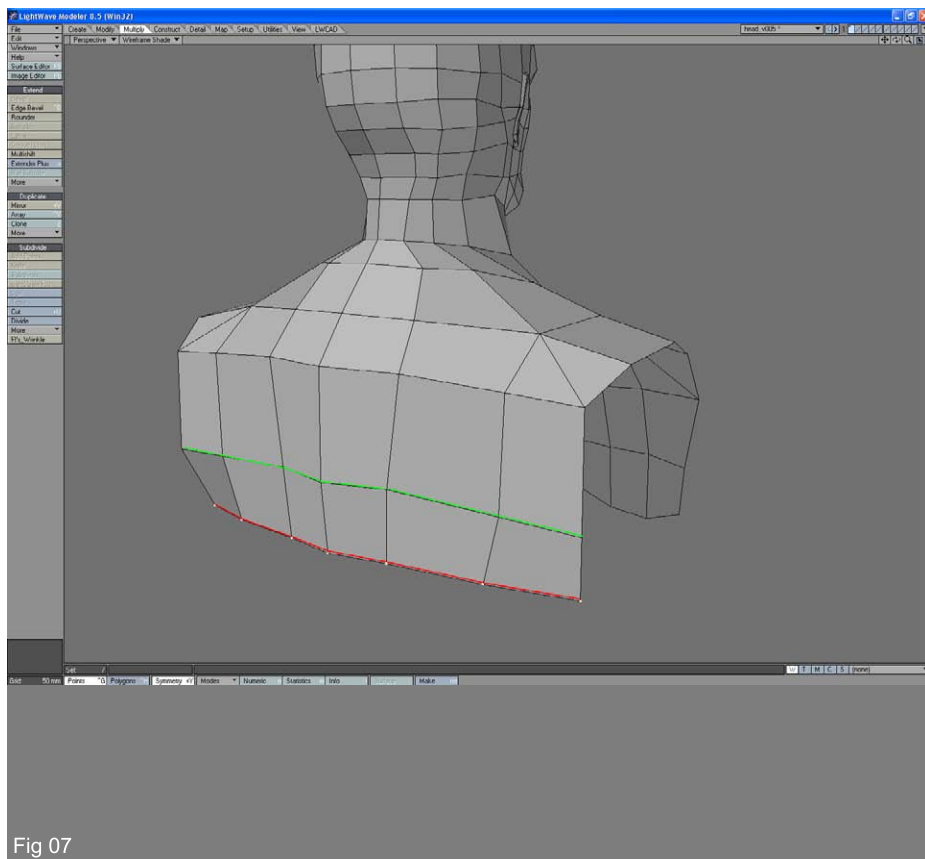
Readjust the new points to form the beginning of the arm. Finally, to retain symmetry, delete these two polygons on the other side of the model, mirror these four new polygons to the other side and merge points on the other side.



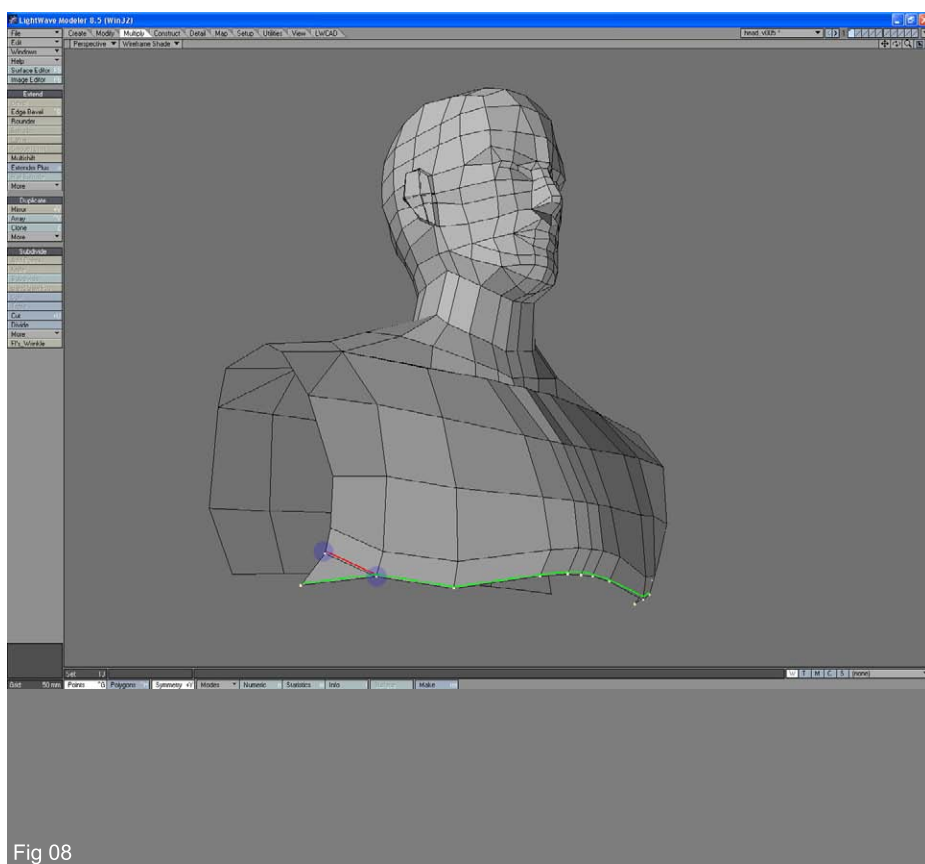
6. To form the chest area, select the front bottom points of the model, extend them once and move them downward and adjust them like in the image (Fig06 green line). Repeat the same once more (red line in image).







7. Do just the same thing on the back side of the model. Again, extend, adjust and extend, adjust (Fig07).



8. Back to the front part. Again, select bottom points, extend and move down and inward a bit (green line in image). Add point and split the polygon like it's shown by the red line in image (Fig08).



9. Do another extrusion on both front and back parts and again move the points to adjust the shape. Green lines indicate where they should be (Fig09).

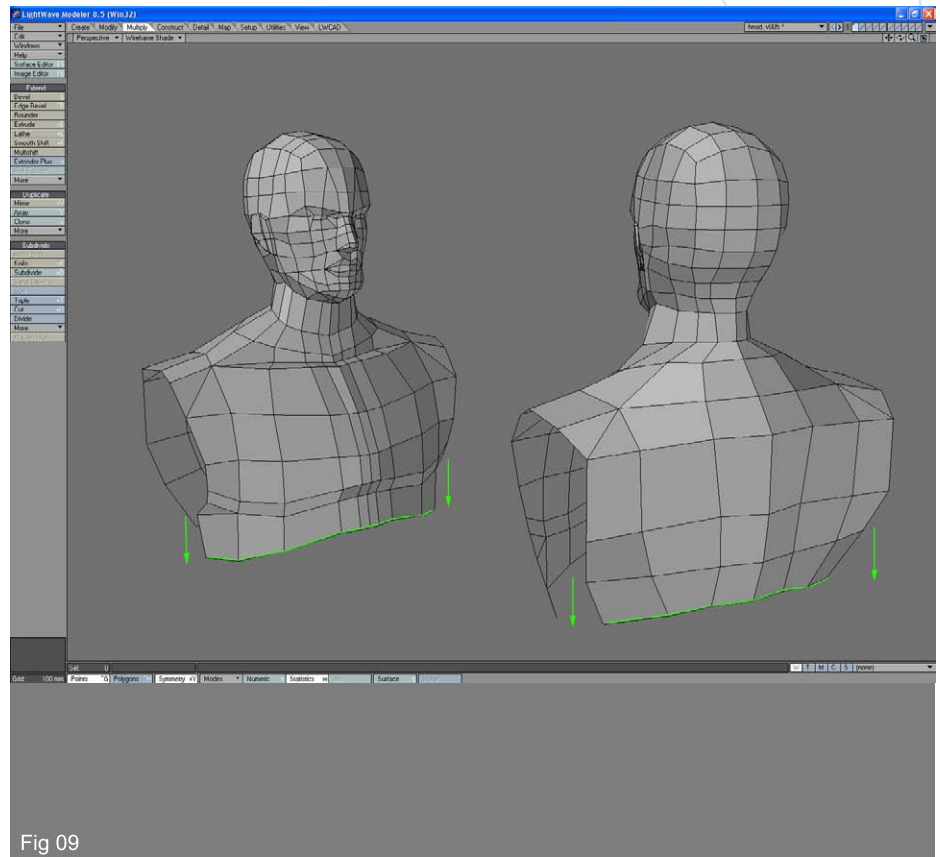


Fig 09

10. Make extension like it's shown by the green line on the left part of the image. Merge the two points marked blue in the image. Select 3 points in clockwise order shown on the right part of the image and hit 'p' to make a polygon out of them. Finally, select these two newly created polygons, mirror them on the other side and merge points (Fig10).

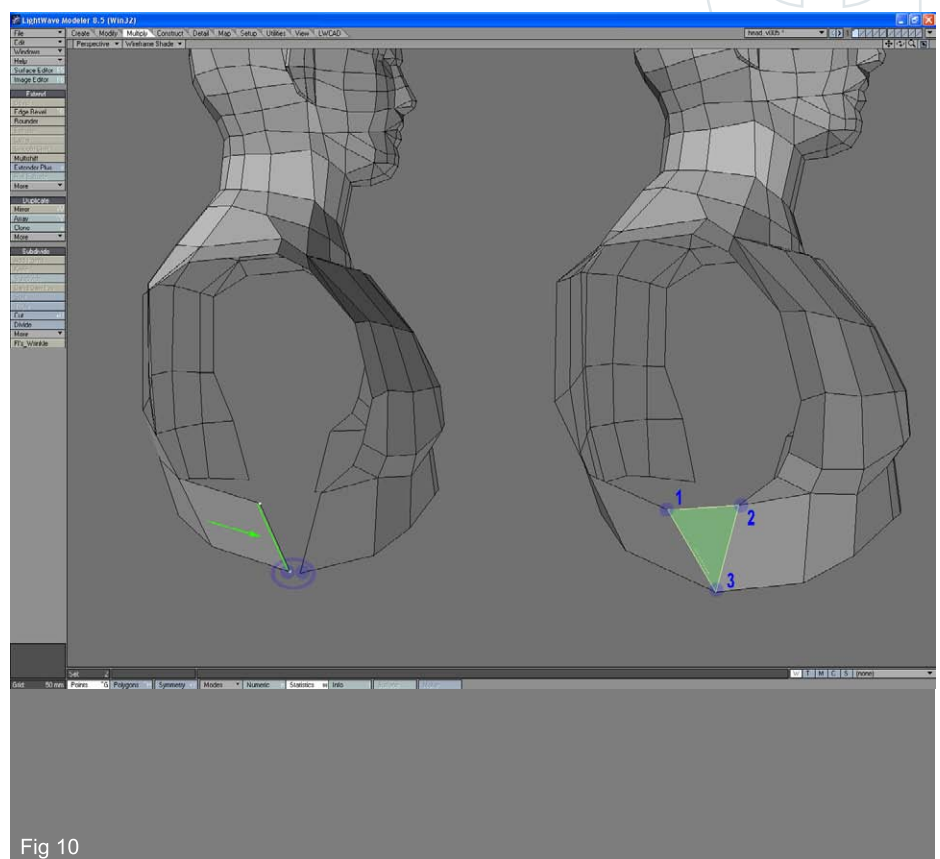
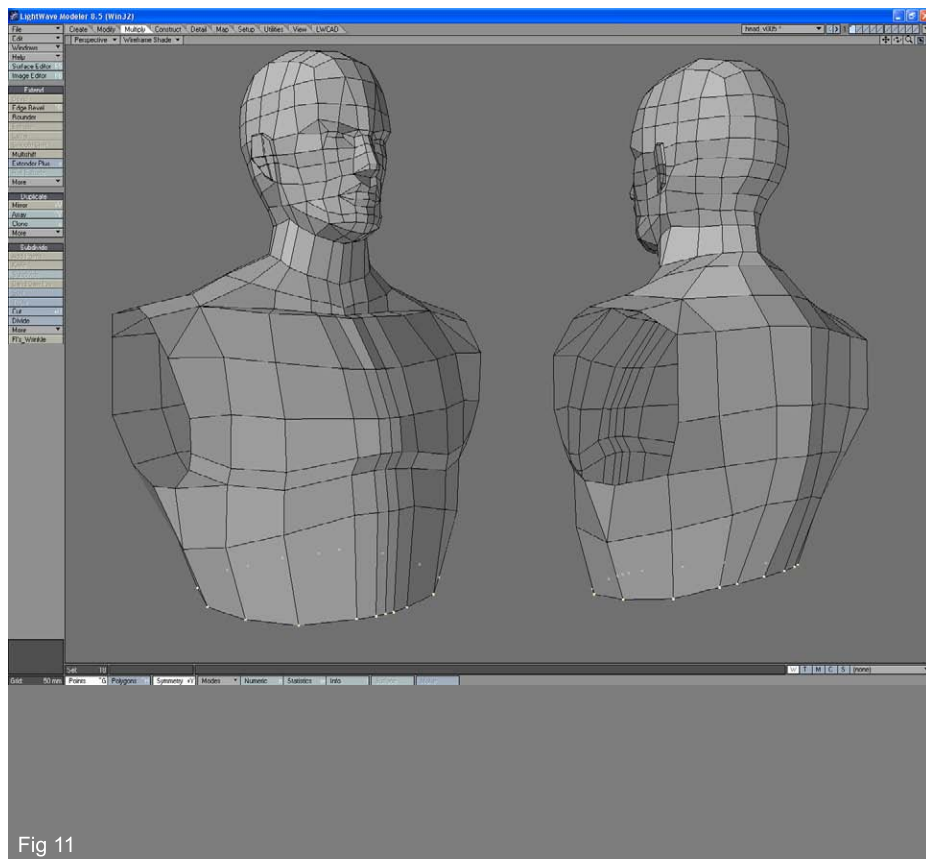
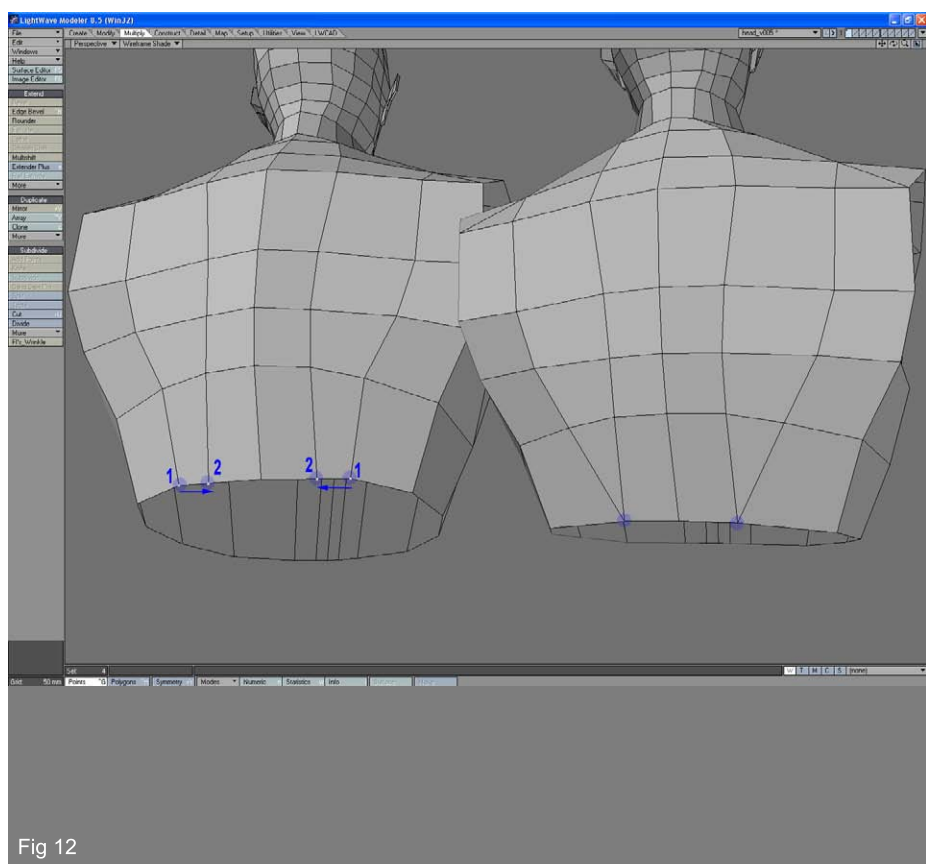


Fig 10





11. Now when there is a complete upper torso along with arm holes, we just continue extending down to the abdomen and pelvic area. So, select lowest point ring and again extrude those points and adjust them. (Fig11).



12. Weld points pairs in order shown in the image to help form the muscles of the back (Fig12).



13. Once again, select the bottom row of points, extend them, move them down and stretch them a bit along X axis (Fig13).

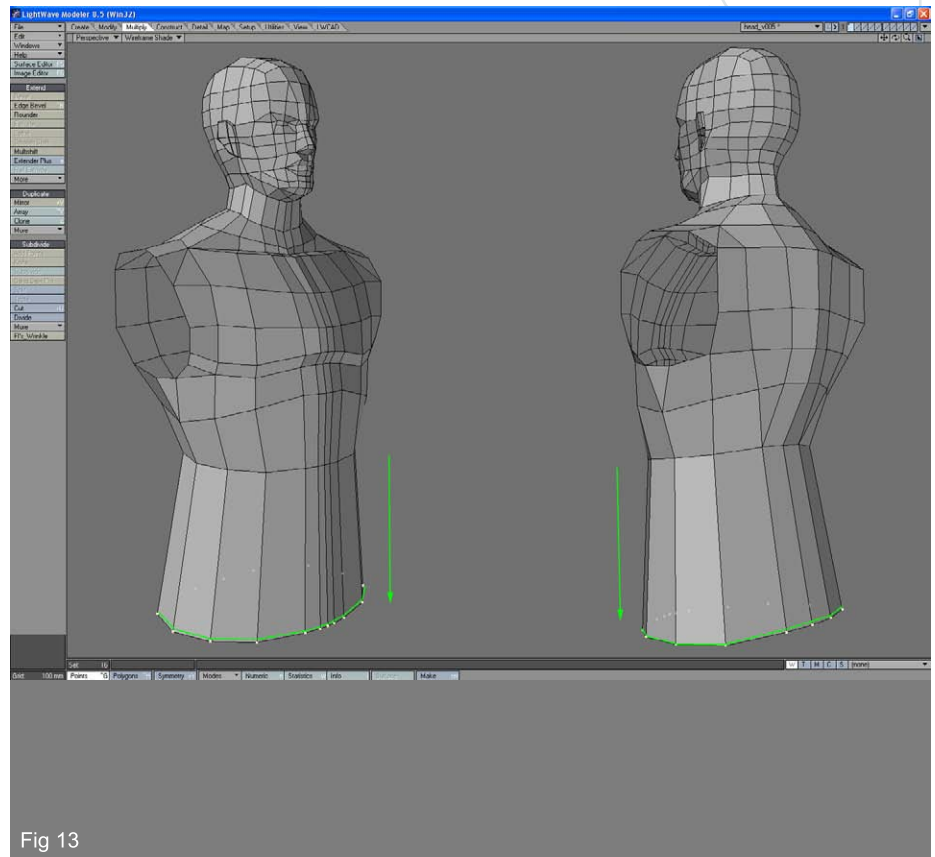


Fig 13

14. Select two polygons marked in the image and in the order shown in the image. Activate the BandSaw pro tool and make 3 cuts (on 25, 50 and 75%). Now we have 4 segments in this newly created portion (Fig14).

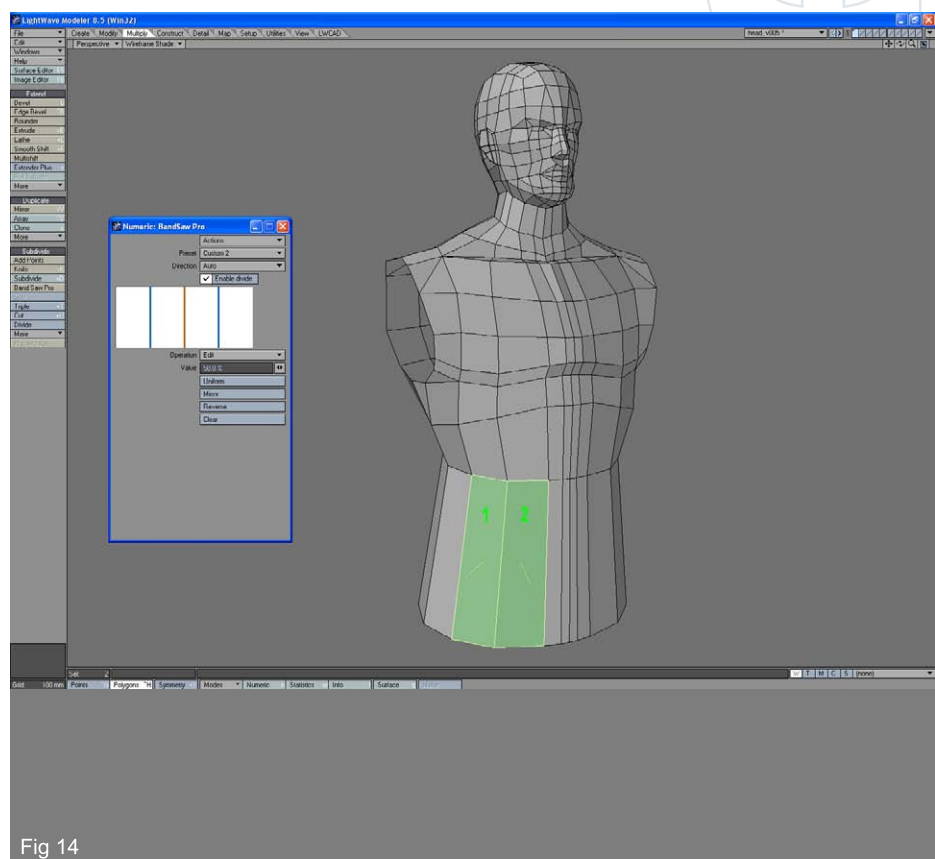


Fig 14



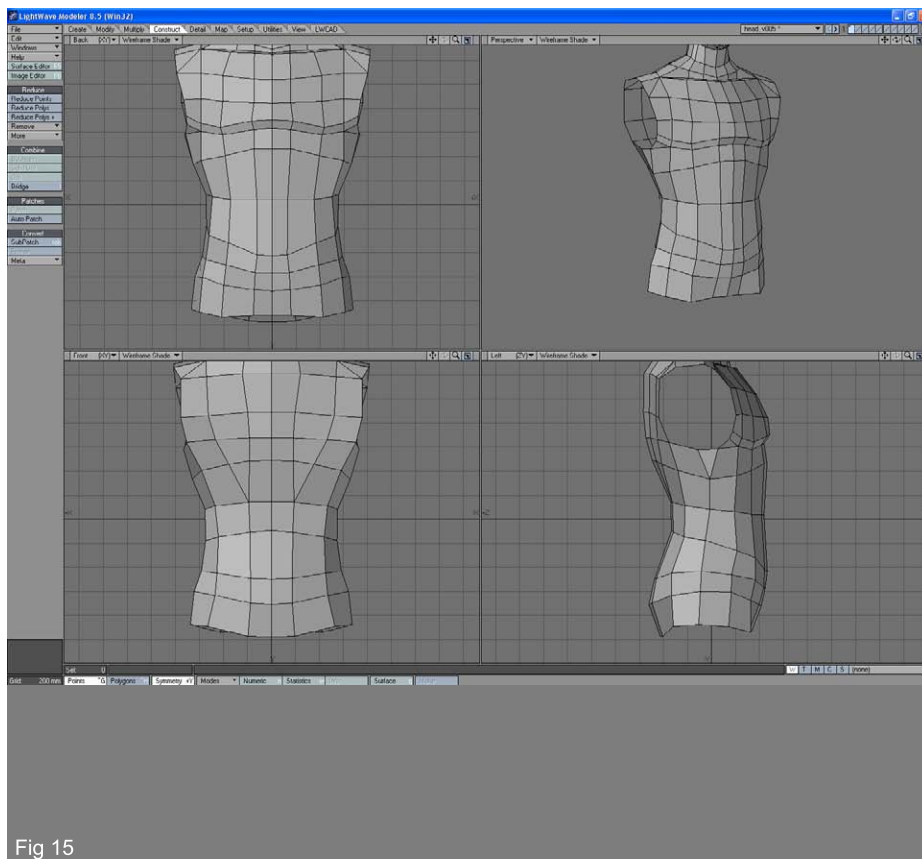


Fig 15

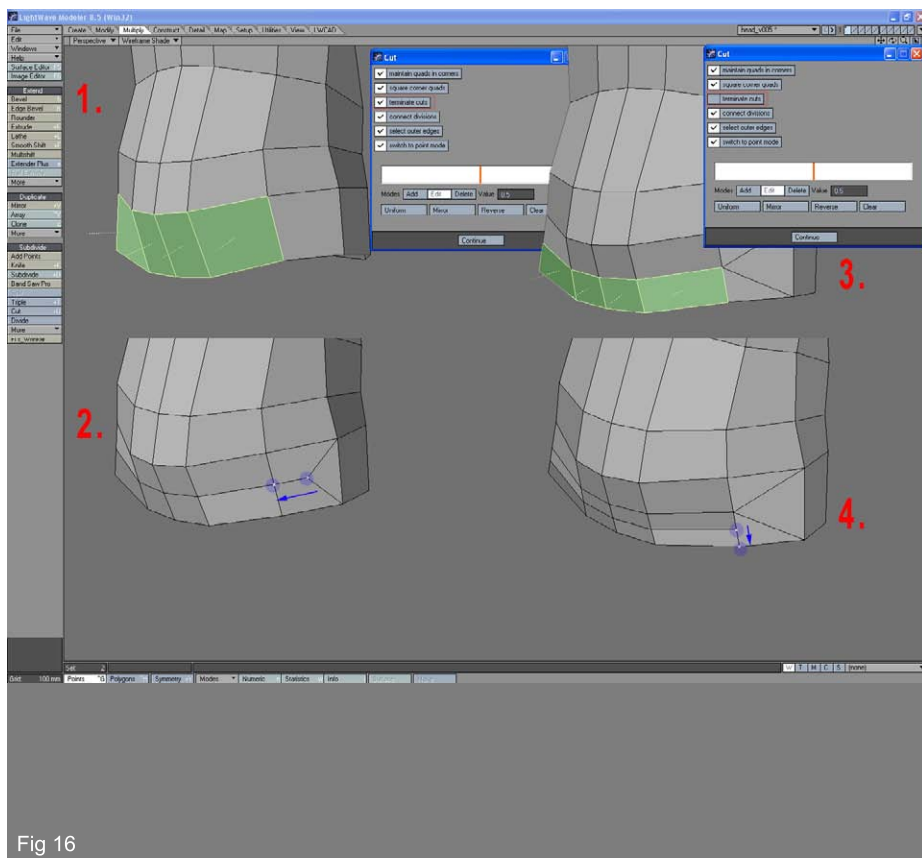
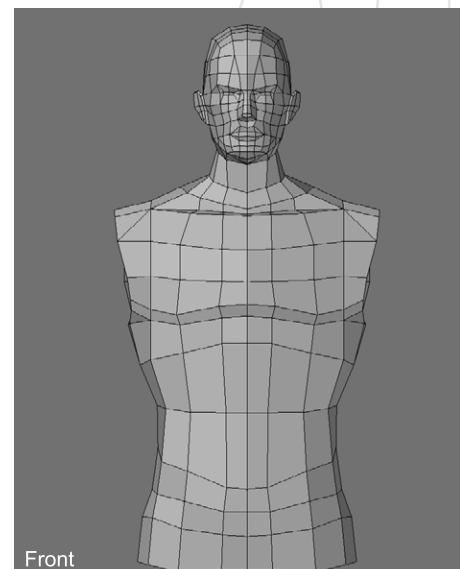
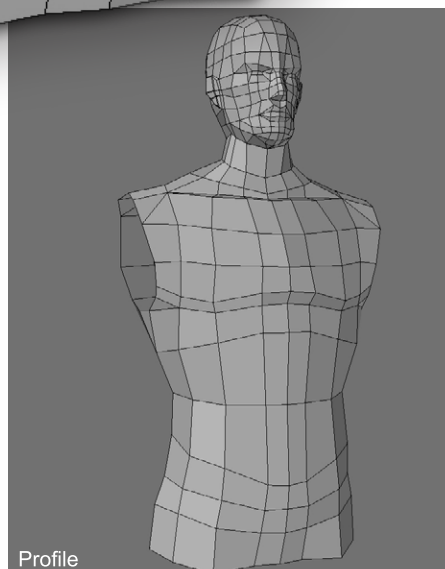
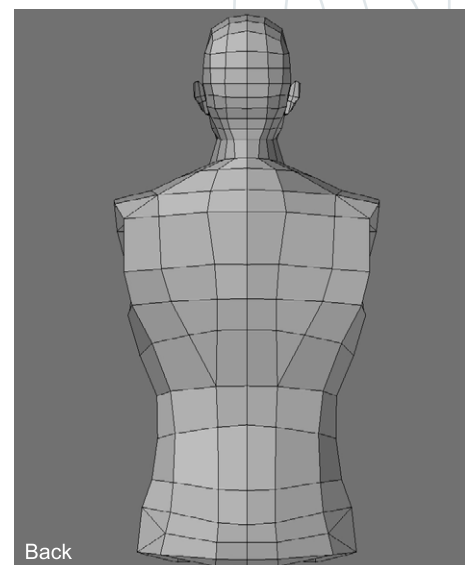
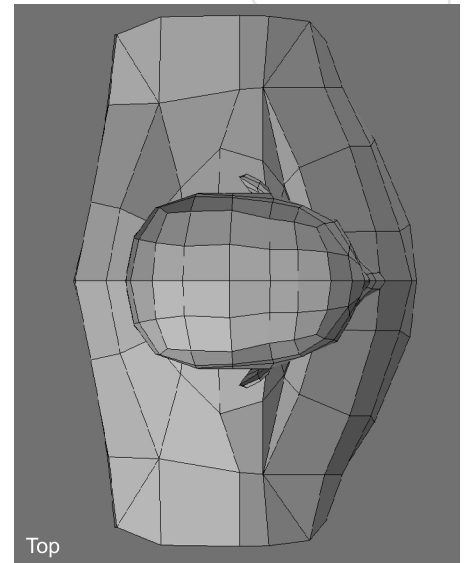
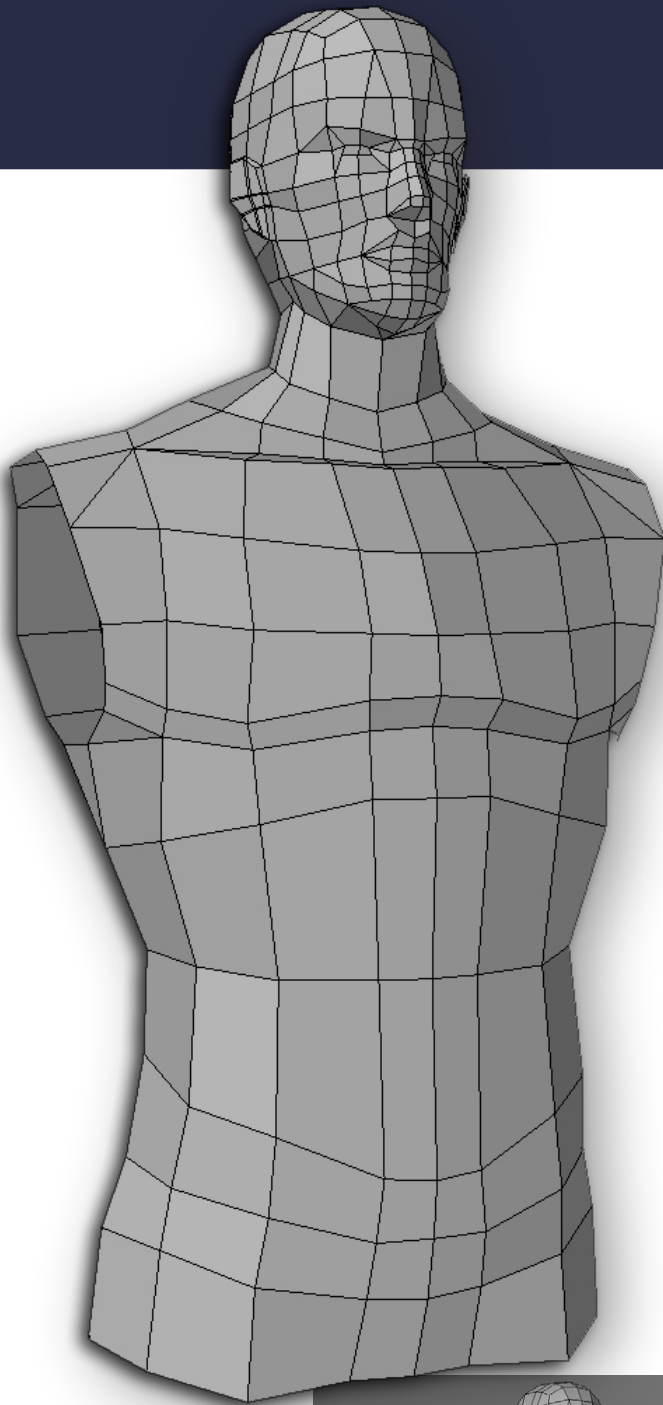


Fig 16

15. Now use the Drag tool and adjust the points to form the lower torso and the top part of the buttocks. Probably the easiest way to do this is to use the same way it's done when we shaped the head. First adjust points in the front view and then in the side view. If you have troubles selecting the front points without selecting the back one, simply switch the front (or back) view from Wireframe to Wireframe shade, and you'll be able to select only the visible points without accidentally selecting unwanted points (Fig15).

16. We need now to add some more geometry to the buttocks area. Turn off Symmetry mode if it's on, and select the polygons marked green from the most left to the most right one (step 1. in image). Activate the Cut tool, leave everything as it is, only activate the 'terminate cuts' option and click Continue. Weld points (step 2. in image) in order shown and do the same on the other side of the model. Again select marked polygons (step 3.) and activate the Cut tool, only this time turn 'terminate cuts' off and click 'Continue'. Weld points in order shown (step 4.) both on the left and right side. Finally use the Drag tool and adjust newly created points so the shape is more natural (Fig16).



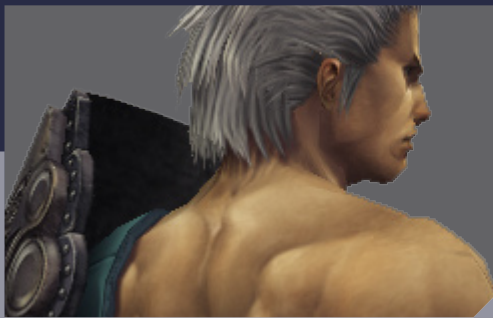


This is the end of torso part of the Swordmaster tutorial. Next month we are going to build the arms and legs and complete the body model.

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The 'Swordmaster'  
character was originally created by  
SEONG-WHA JEONG  
www.xcloud.net





Swordmaster



## THE SWORDMASTER

Maya

Is our new precise, step by step tutorial for highly polished, low polygon game character with detailed texturing for real-time rendering.

We have had the tutorial created for the 5 major 3d applications, but even if you are not a user of one of them, the principles should be easily followed in nearly all other 3d applications. Over the next 8 months we will outline in detail the process for creating the 'Swordmaster' you see on the left. The schedule for the different parts of the tutorial is as follows:

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Issue 015 November 06

TEXTURING THE SKIN & BODY

Issue 016 December 06

TEXTURING THE ARMOUR & CLOTHING

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## PART TWO MODELLING THE TORSO

1. First step is to open the older file containing the head made in the first part of this tutorial. It's better to use a copy of the older file or use "Save as" command for this one that is already open. Select the lower row of edges from the neck as in "Fig 01". Using "Edit Polygons > Extrude Edge" tool we're extending down the bottom of the neck. Remember that while we're working with "instance" option we save plenty of time working only on a half of the model. The other half is changing automatically.

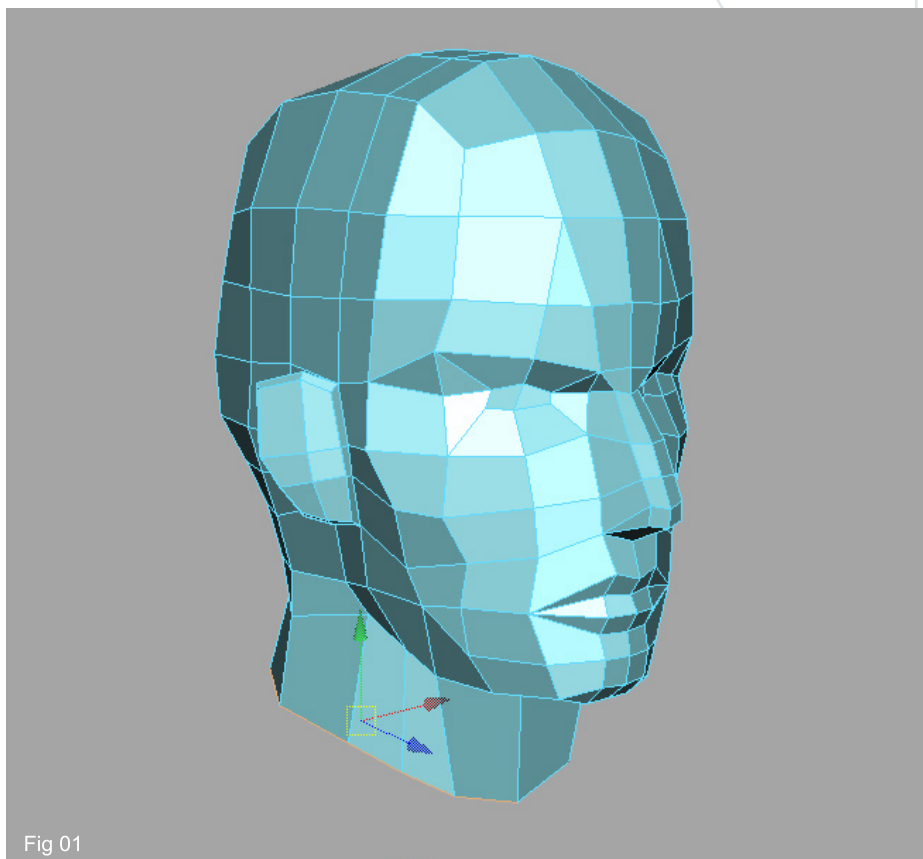


Fig 01

2. I want to build the upper side of the shoulder. Start moving the vertices outwards until you get the same result as in "Fig 02". On the lower left image from the "Fig 02" you can see how are the vertices disposed in space using another point of view.

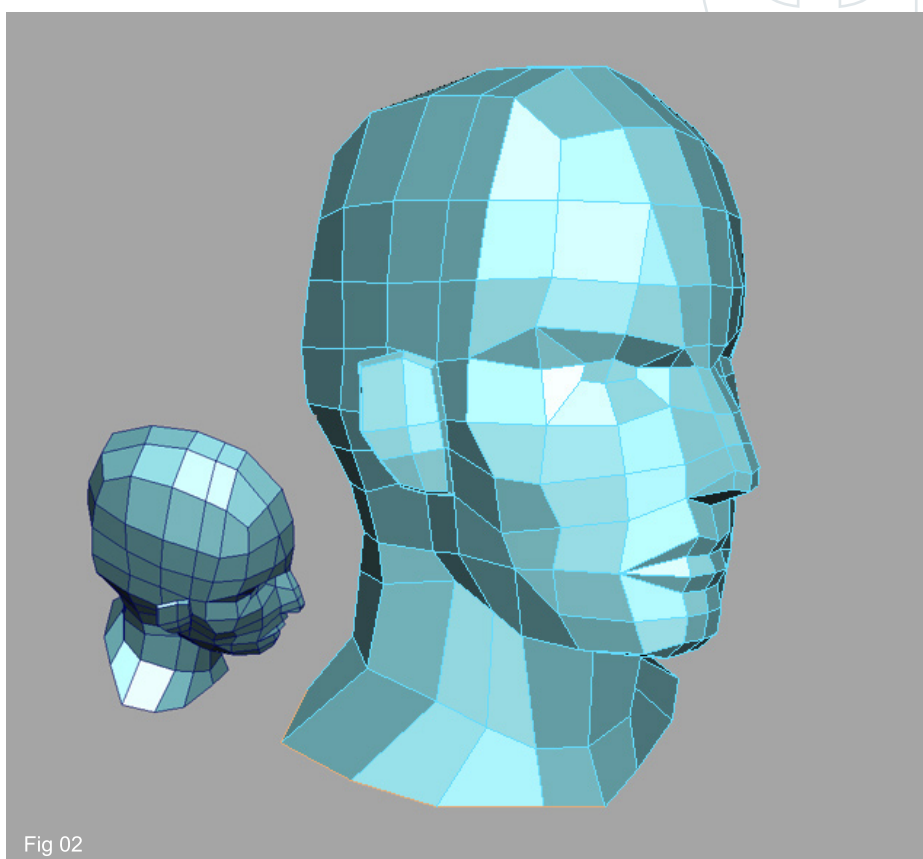


Fig 02



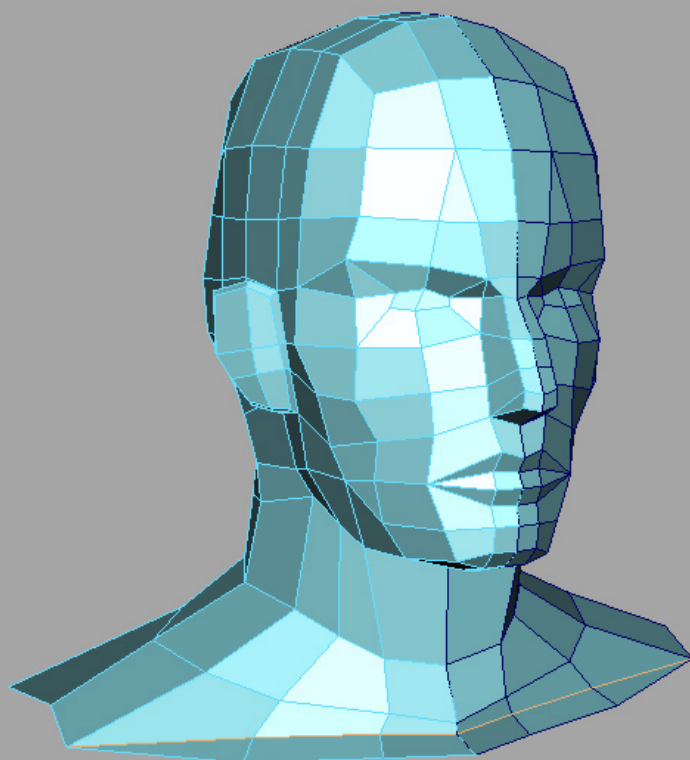


Fig 03

3. With "Edit Polygons > Split Polygon Tool" we're splitting 3 faces from the bottom of the neck "Fig 03". This will help later form the clavicle.

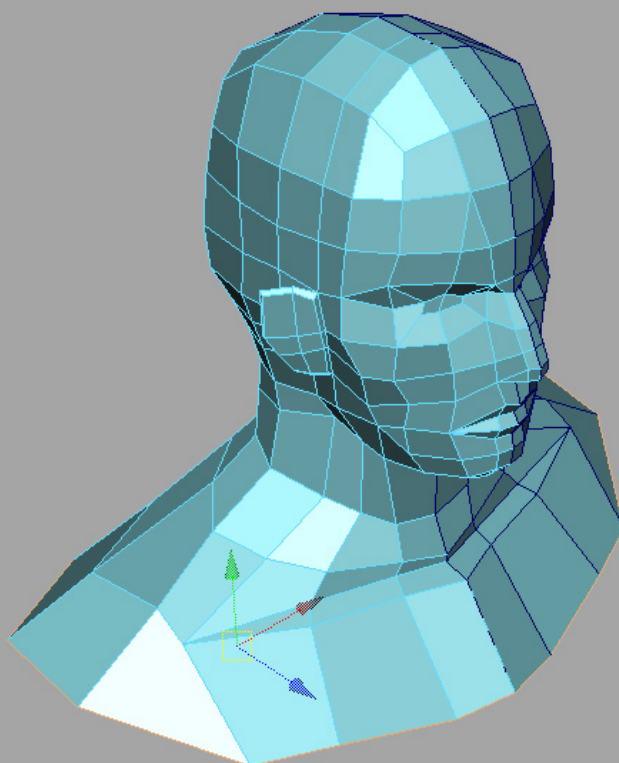


Fig 04

4. Select again the lower edges and create a new set of faces using the same tool "Edit Polygons > Extrude Edge". Rearrange the vertices to get a better shape. It's better to spend some time arranging the vertices well into position, as better as you can, before making the extrude. This will save your time later and it's much more easier to follow the main line of the model (Fig04).



5. We've done most of our shoulder by extruding edges and moving the vertices. Now we're going to create the connection area between the arm and the shoulder.

NOTE: I have to take a special attention to this step because in this region will be set the articulation that will allow the arm to have a proper movement. If I am not giving enough tessellation the surface it will have strange behaviour during animation.

We're making 2 more edges - "Fig 05" - by using "Edit Polygons > Split Polygon Tool".

NOTE: By splitting the faces in two parts I'll have two triangles taking care by the front or the back part of the shoulder and two triangles for the upper part of the arm. This way the surface will move smooth during animation.

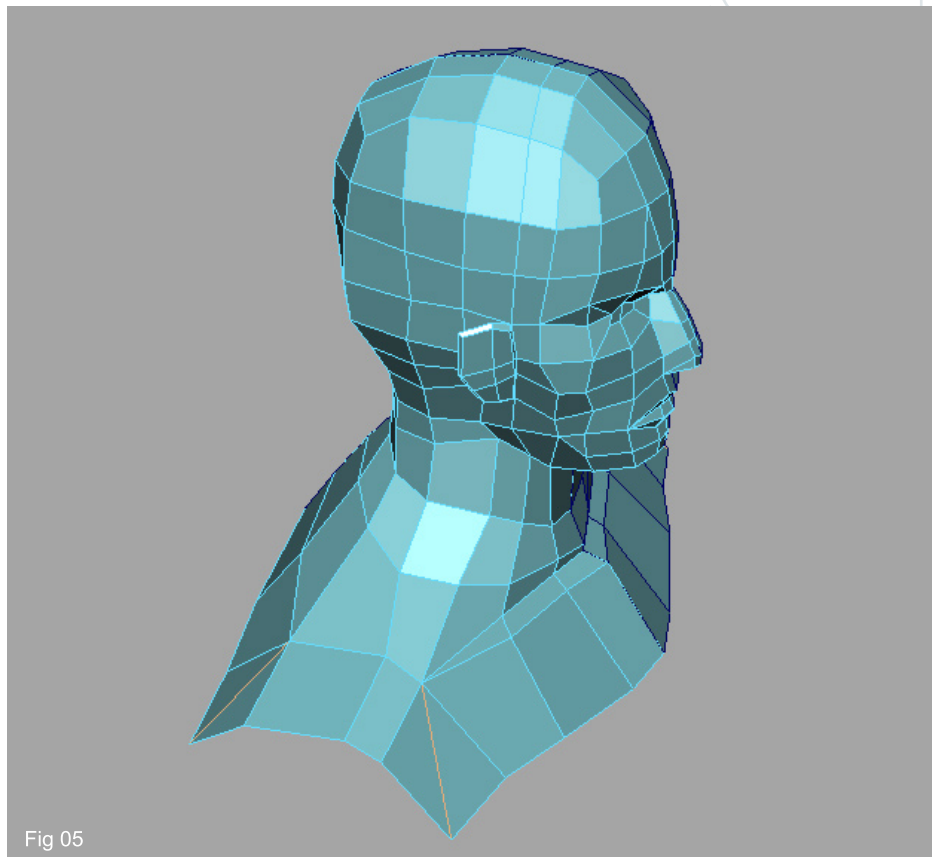


Fig 05

6. It is now time to create the chest. This should be a very easy part especially if you paid attention while arranging the vertices. You just have to select the lower edges and extrude them down twice. Now rearrange the verts until you get something like in "Fig 06".

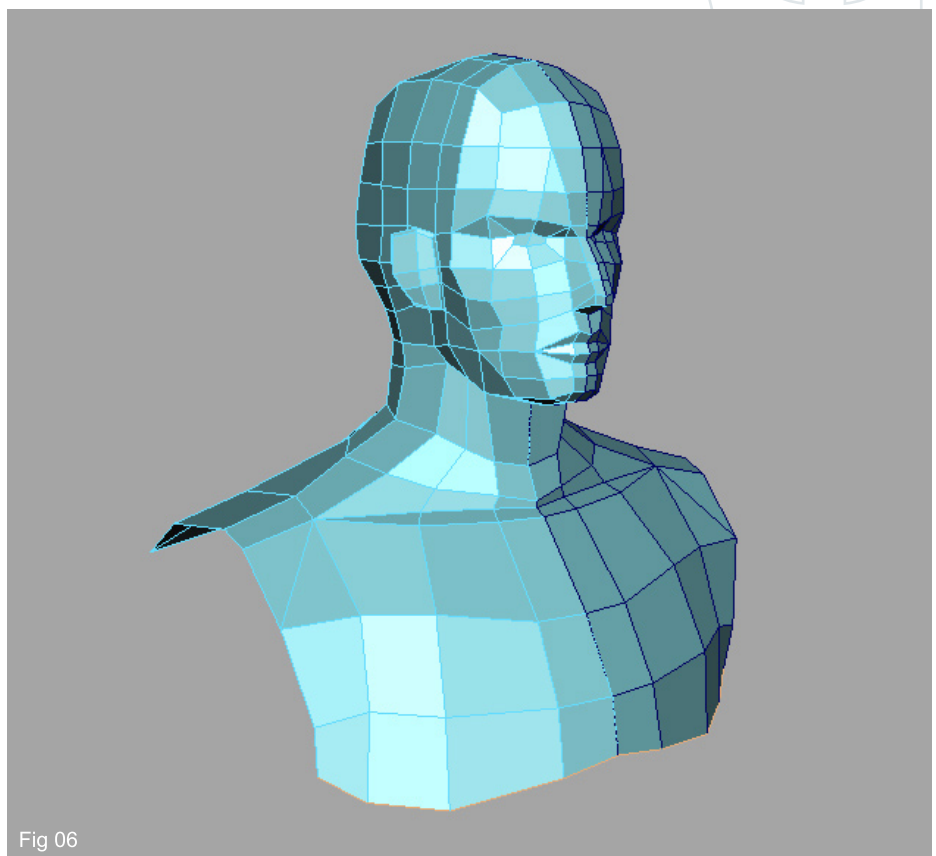


Fig 06



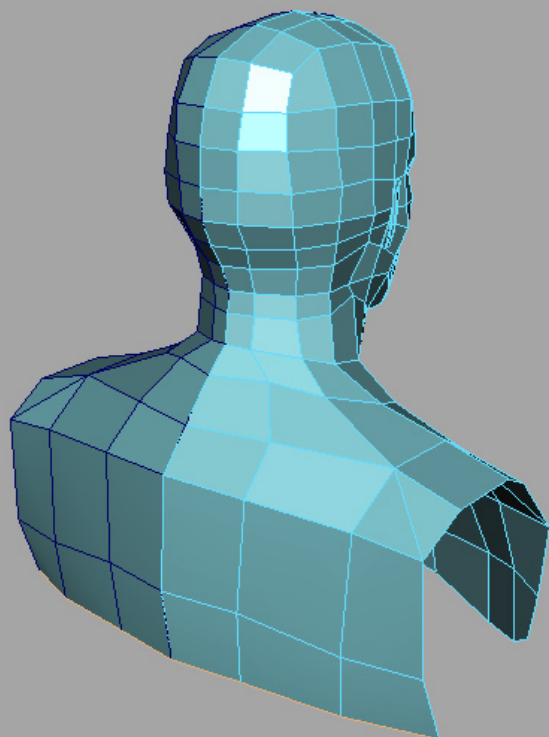


Fig 07

7. We're using the same method for the backside "Fig07".

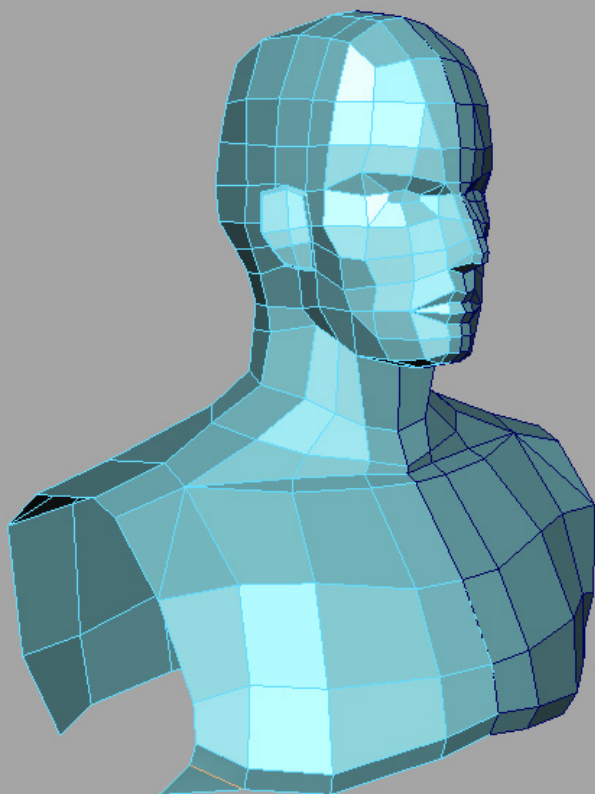


Fig 08

8. Getting back on the chest, select the lower edges again and extrude them once. Push them inside a little bit in order to form the lower part of the chest. Note that we've added one more edge on the corner in order to connect the arm later "Fig08".



9. In "Fig 09" notice that the upper part of the arm starts to take shape. Before closing the torso, we are selecting the lower edges one more time and extrude them down.

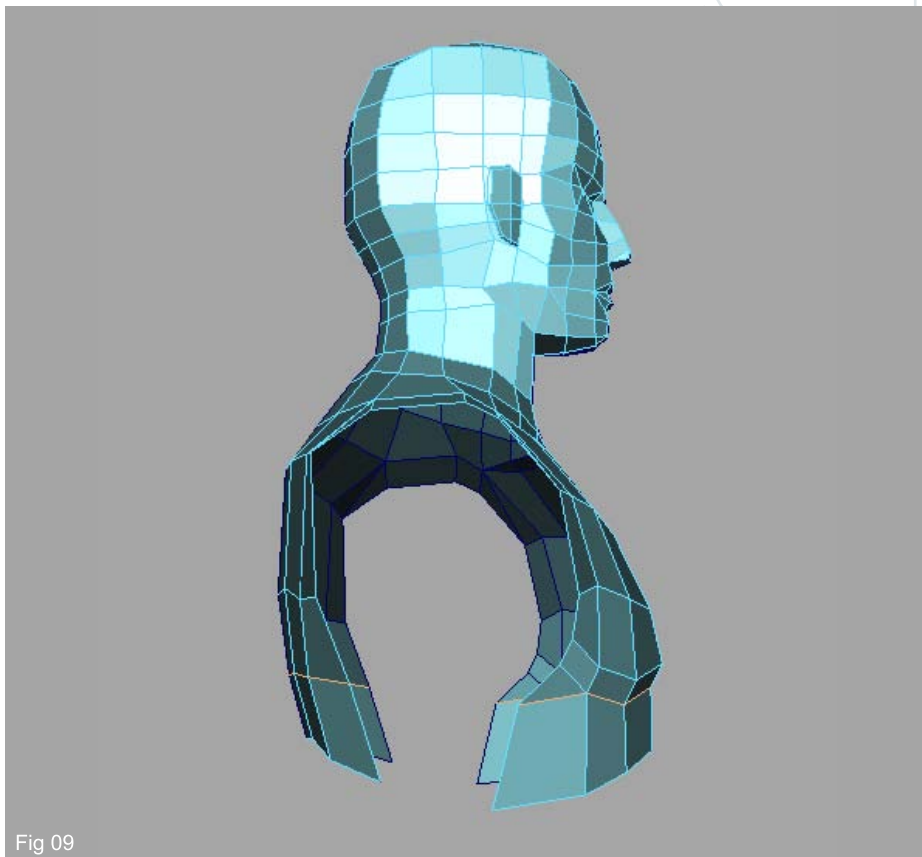


Fig 09

10. Using "Extrude Edge" again extrude one edge from back to front. Use "Merge vertices" or "Merge Edge Tool" to close the surface. I'm going to add one more edge - "Fig 10"- for the same reasons as I've previously splitted the polygons on the upper side shoulder.

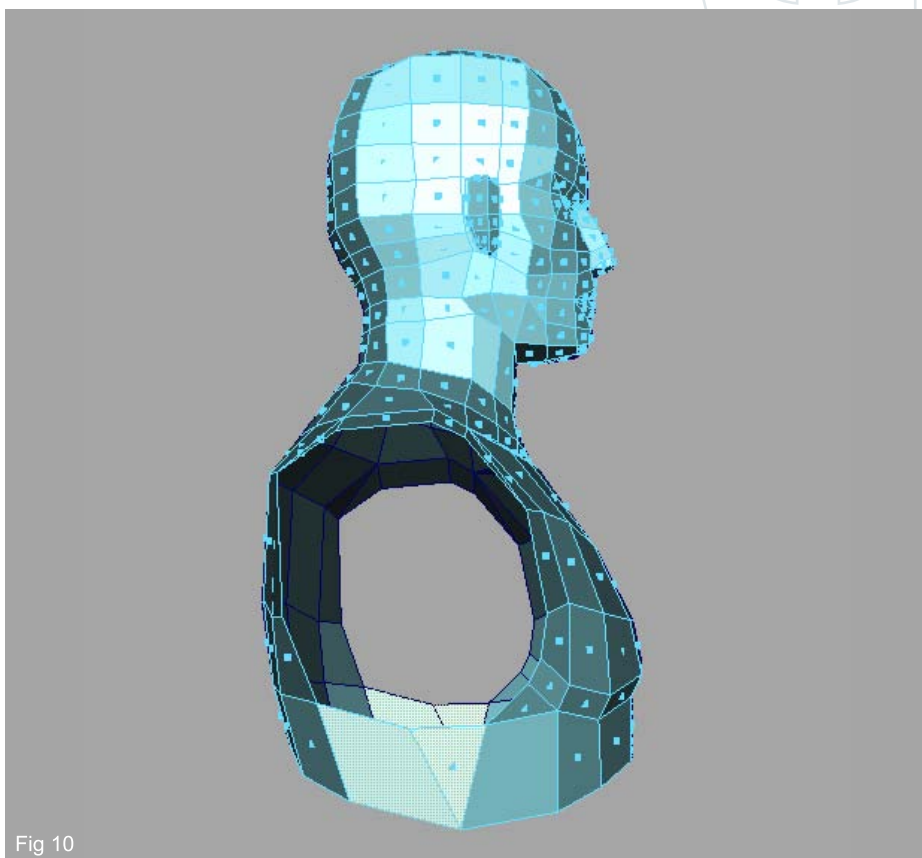


Fig 10



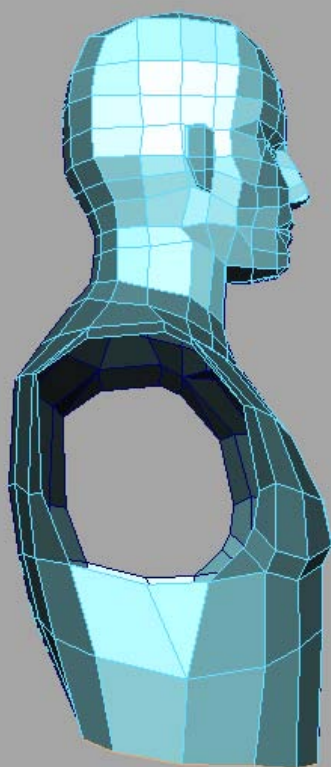


Fig 11

11. Now we've created the upper side of the body and the connection to the arm that will be create later. All we have to now is to finish the lower part of the body. Select the edges as in "Fig 11" and extrude them down once.

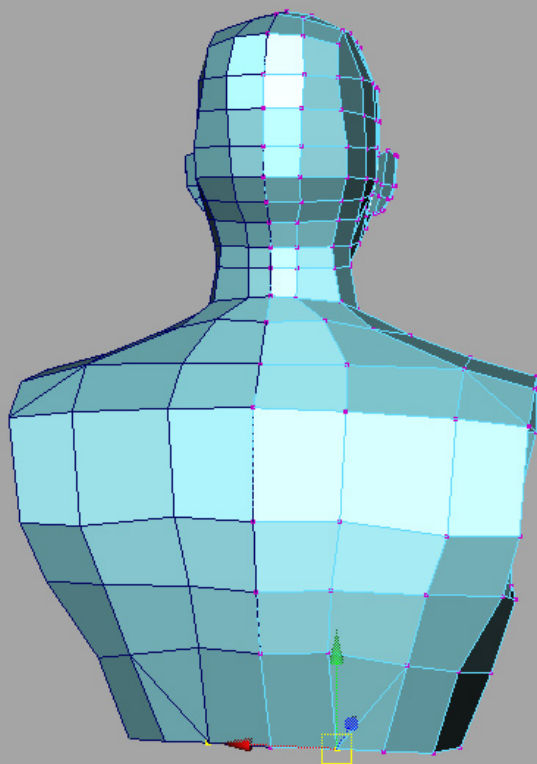


Fig 12

12. In order to give a proper form to the back's muscles we're going to merge the vertex to the one to its left (see "Fig 12"). Doing this we'll have a triangle following the shape of the muscles running downwards from the shoulder blades.



13. Extrude the lower edges one more time but this time a bit more. "Fig 13"

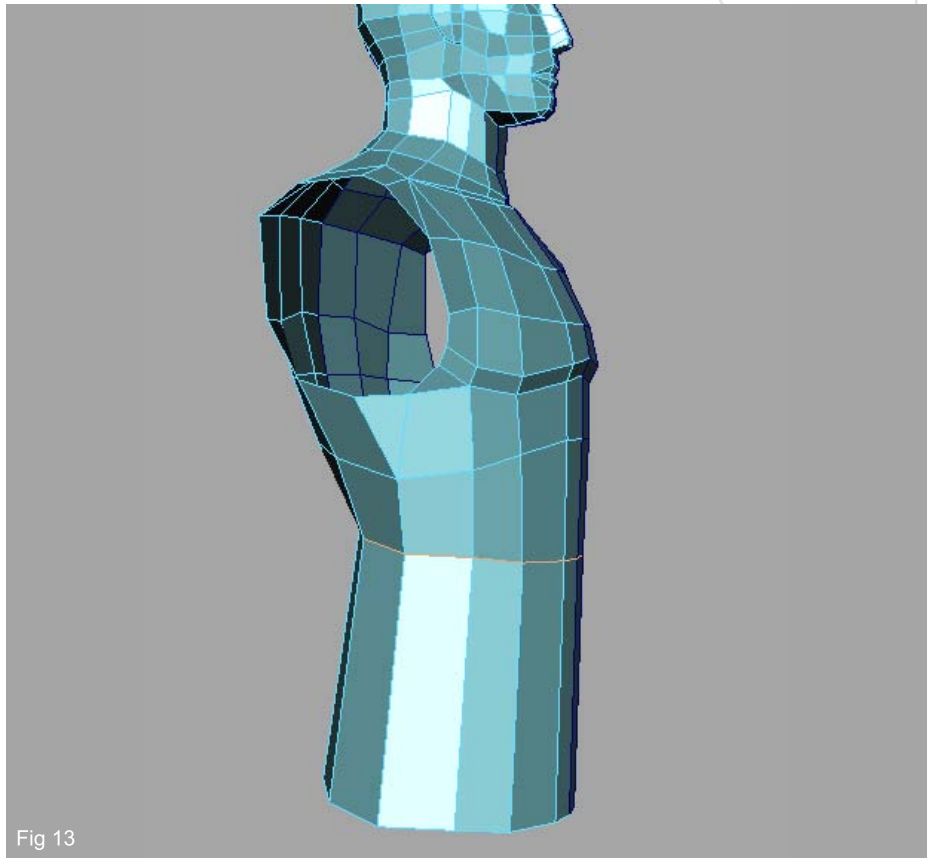


Fig 13

14. Use "Edit Polygons > Cut Face Tools" to add 3 more edges - "Fig 14". We need it for sculpting a nice shape.

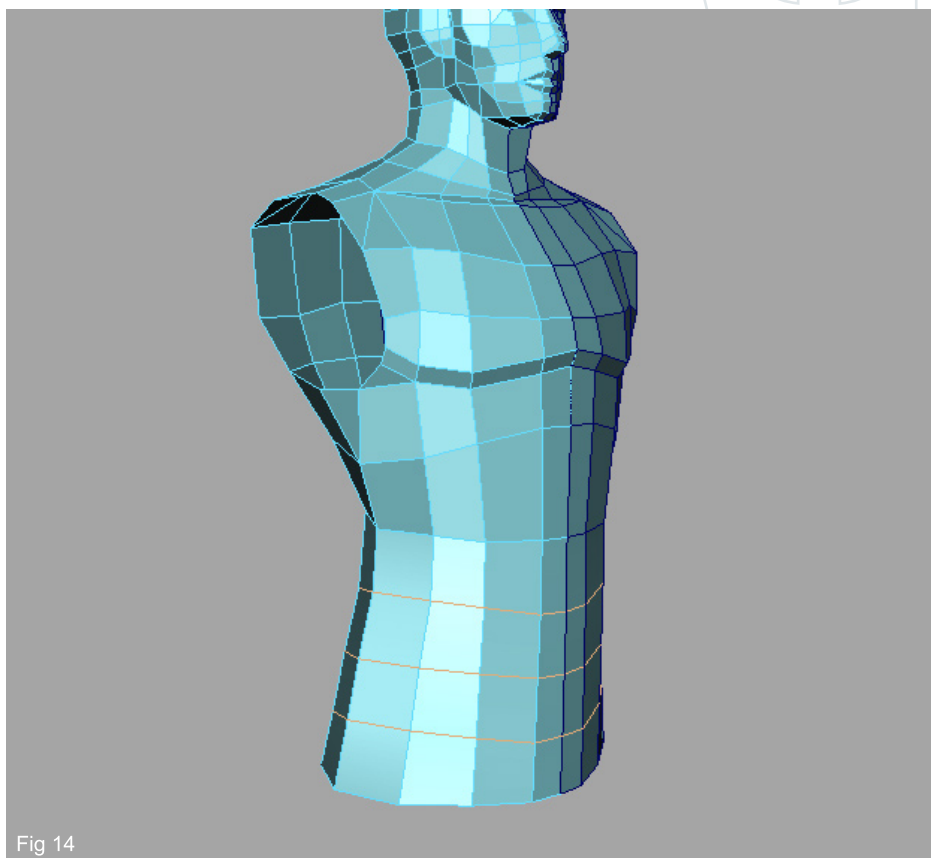


Fig 14



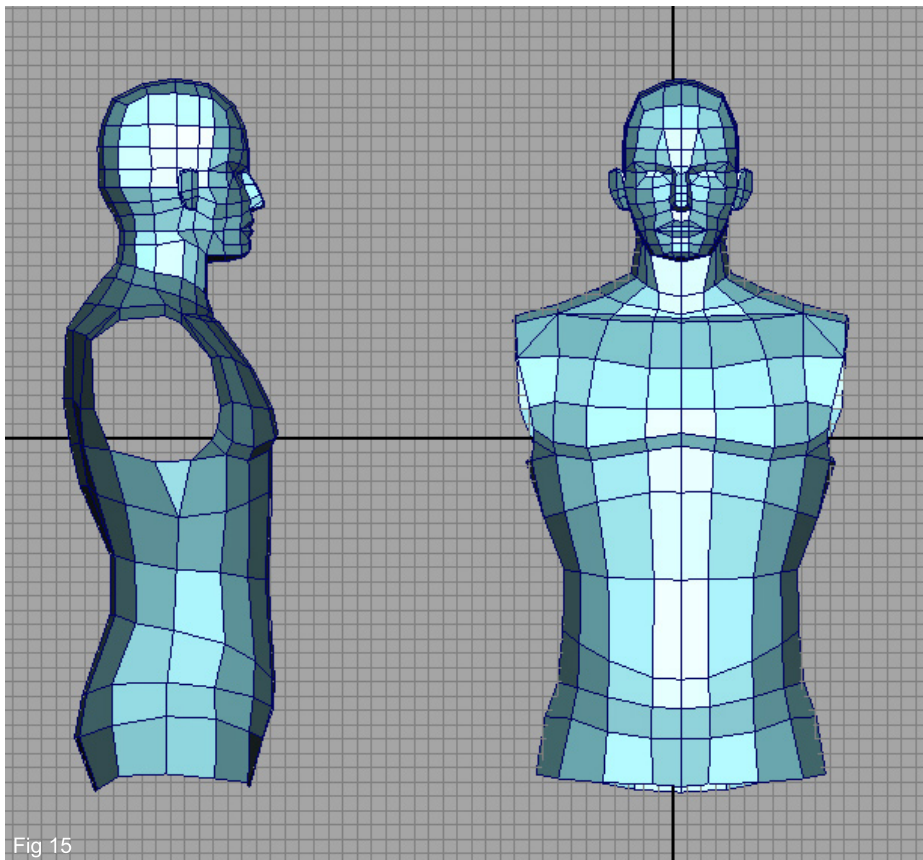


Fig 15

15. Next thing we have to do is to reshape the lower part of the torso by moving the verts until the result is like in "Fig 15".

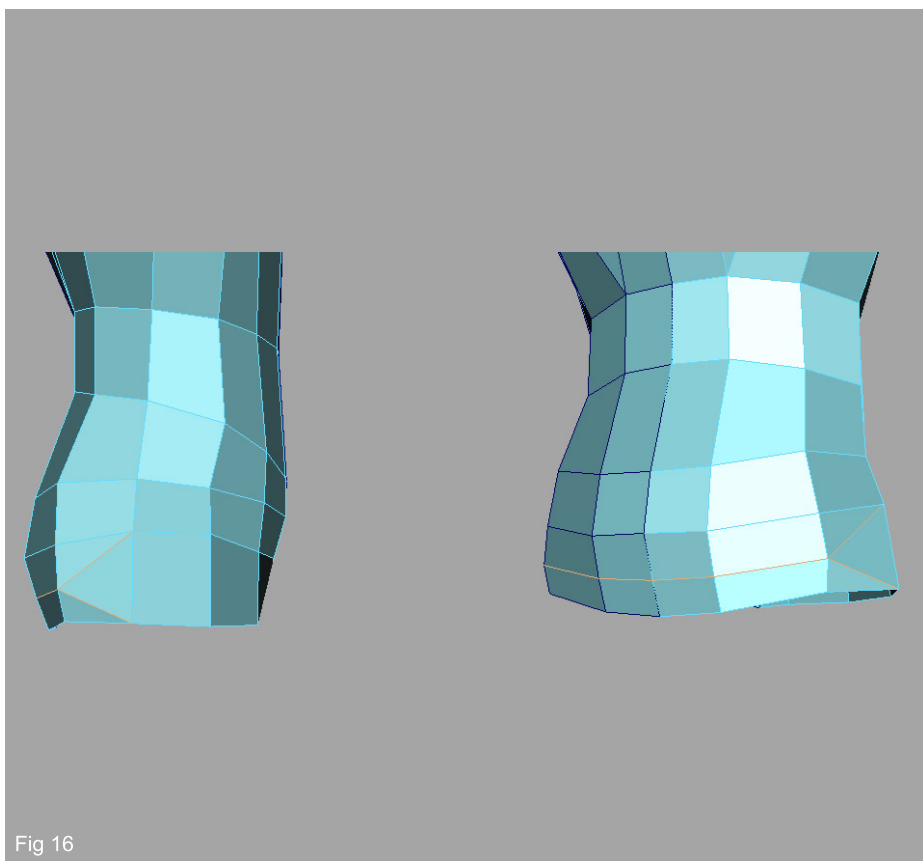
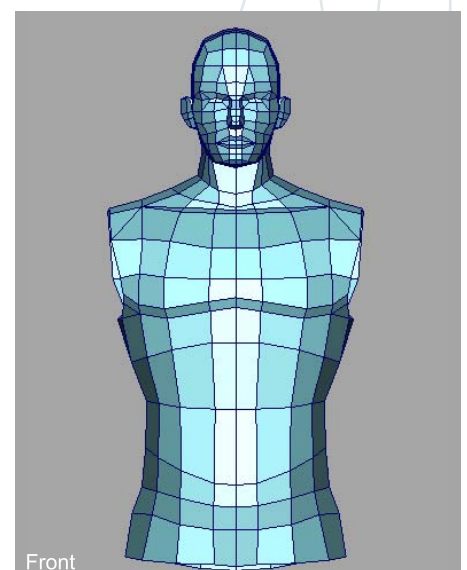
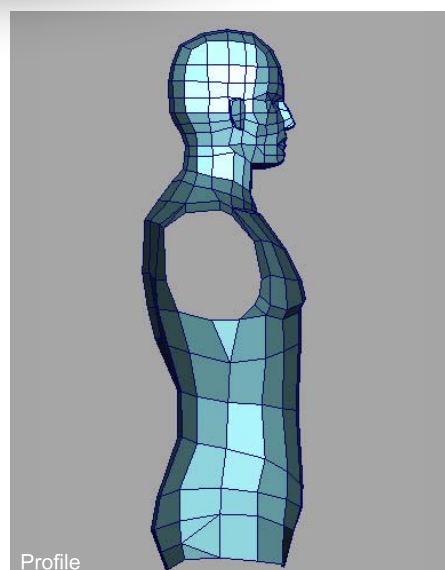
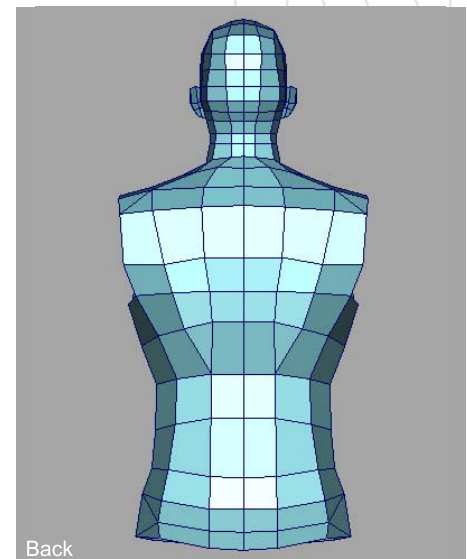
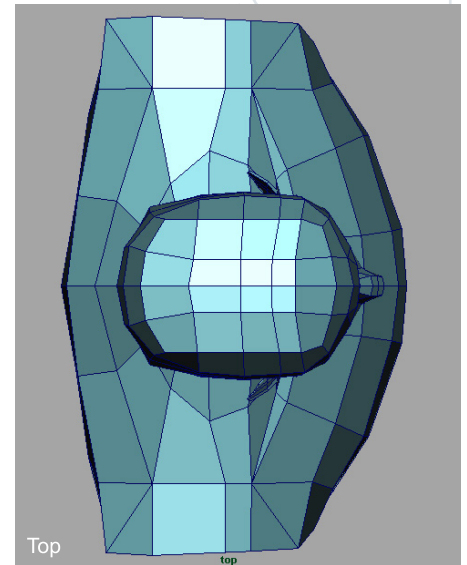
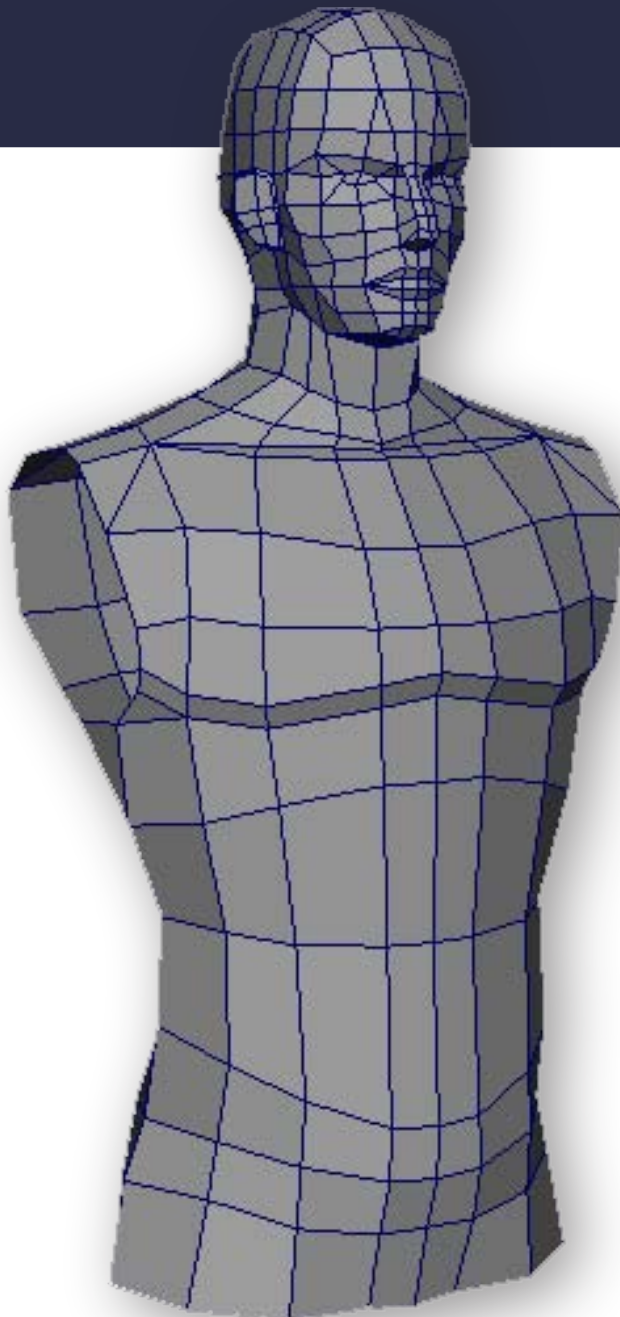


Fig 16

16. One more thing and we've done with the torso. Using "Split Polygon Tool" add few more edges as in image "Fig 16". As for arm's articulation, we're going to need also more edges to describe leg's articulation.

See you next time.

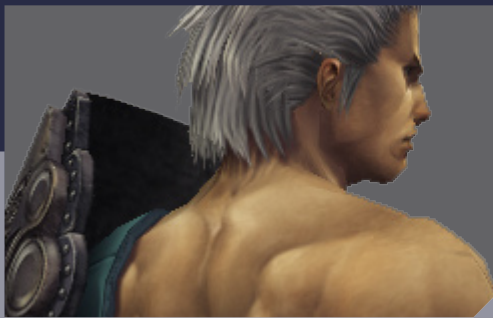




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Swordmaster



## THE SWORDMASTER

SOFTIMAGE® | XSI

Is our new precise, step by step tutorial for highly polished, low polygon game character with detailed texturing for real-time rendering.

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## PART TWO MODELLING THE TORSO

1. If you successfully completed the first part of the tutorial, you should have ended up with the whole head mesh ready. Let's start from this mesh; select the bottom loop of edges (marked in red in Fig01), then use the Ctrl + D shortcut to duplicate/extrude it and move it downwards to create the neck. Don't forget that we can still use the Clone tool to create a perfect clone of half of the head, and work only on that.

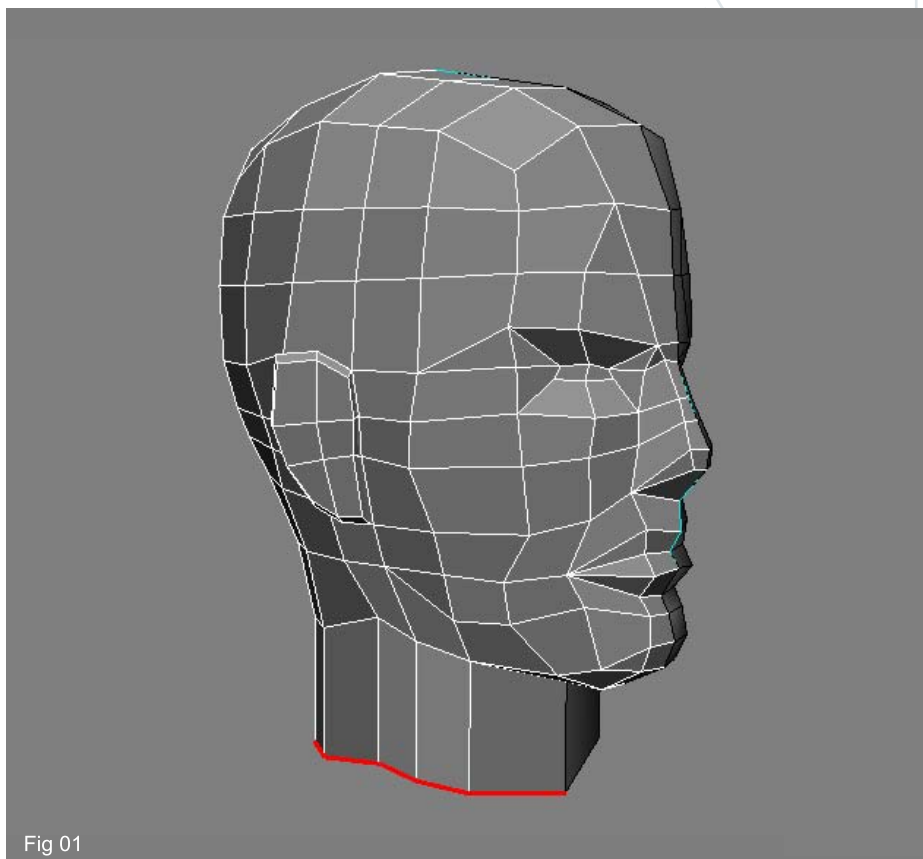


Fig 01

2. Keep extruding the same loop of edges outwards, to start creating the shoulders like shown in Fig02. Use the small picture as a reference to reshape the vertices after the extrusion.

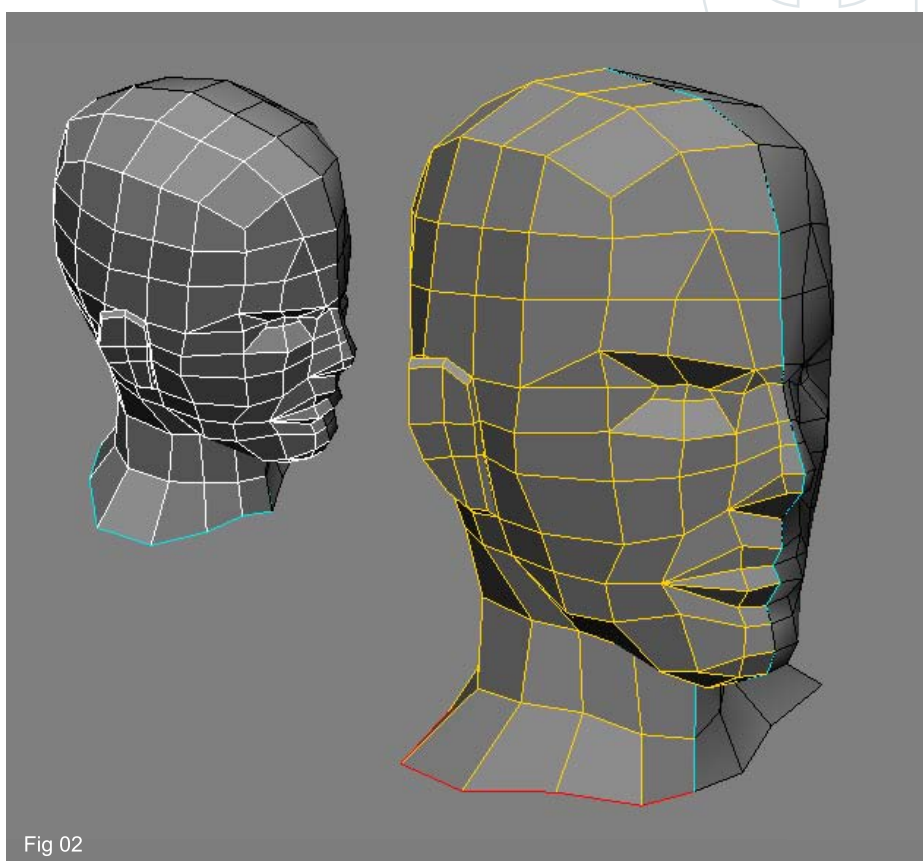


Fig 02



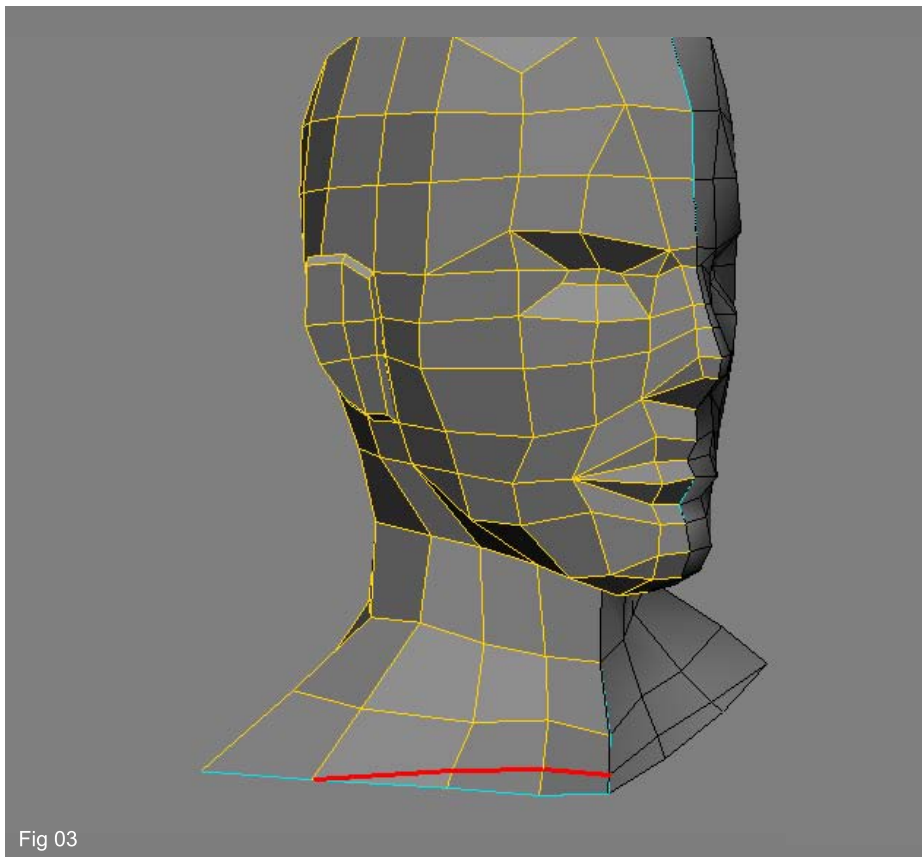


Fig 03

3. Using the same tool as in the previous tutorial (Add Edge tool, "E" is the shortcut key), make three cuts in the front polygons to create the clavicle, as shown in Fig03.

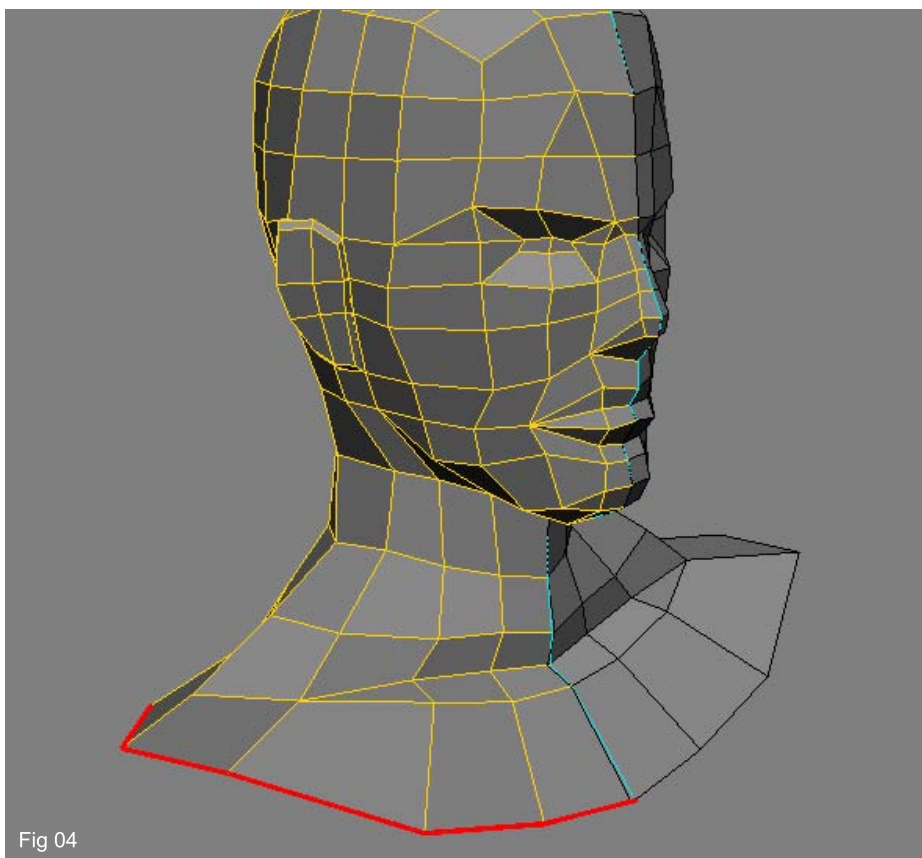


Fig 04

4. Create another extrusion of edges, and now take some time to reshape the vertices to refine the shoulders area. Dedicating some time to adjust the vertices before a new extrusion makes you save more time later on.



5. We need to adjust the ending of the shoulder so that we can extrude the arm later on. Create some new cuts like shown in green and red in Fig05, and move the vertices (marked in red in Fig05).

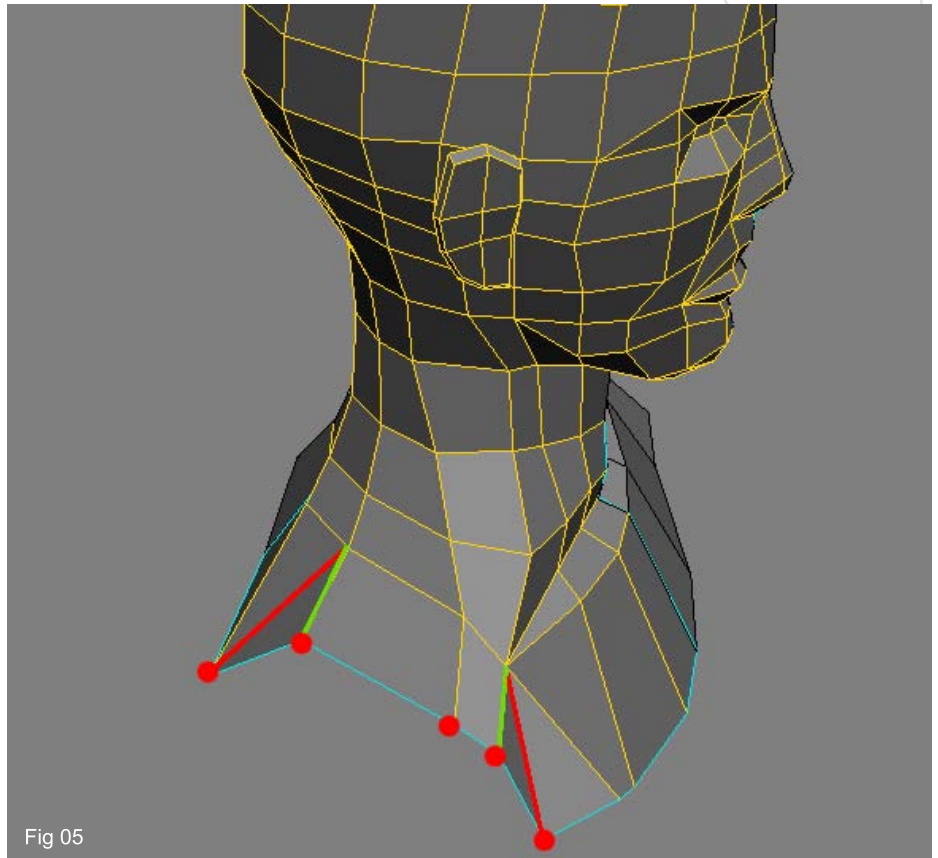


Fig 05

6. We can now continue to extrude the bottom edges (in green in Fig06) to create the chest.

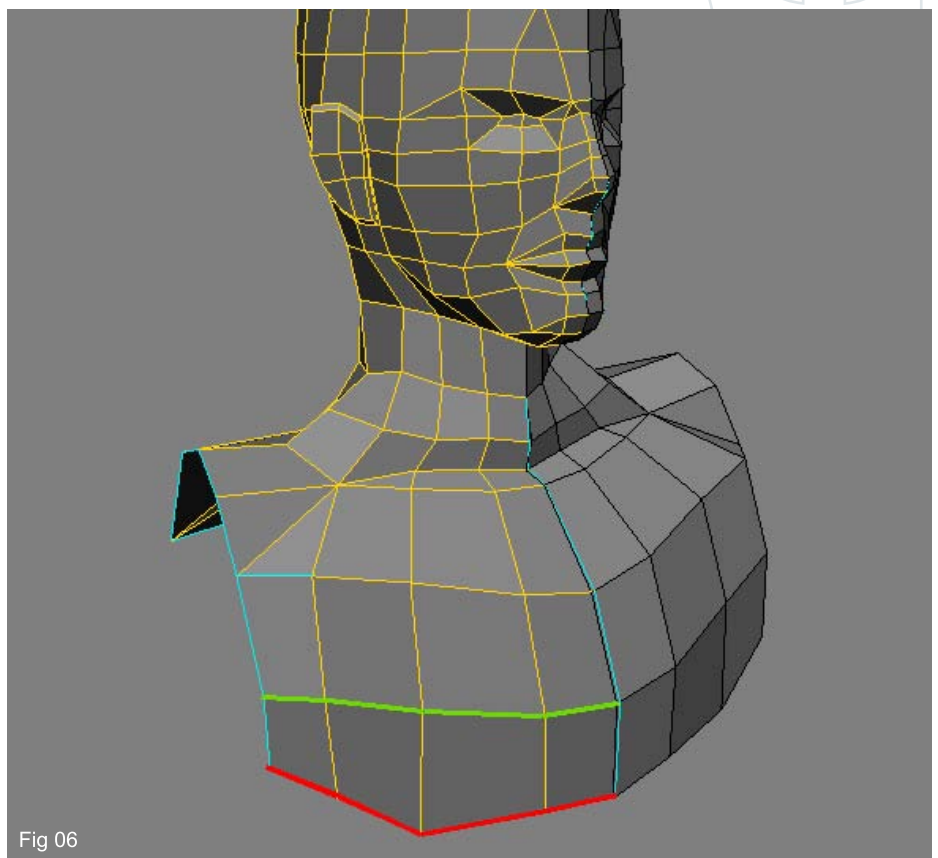


Fig 06



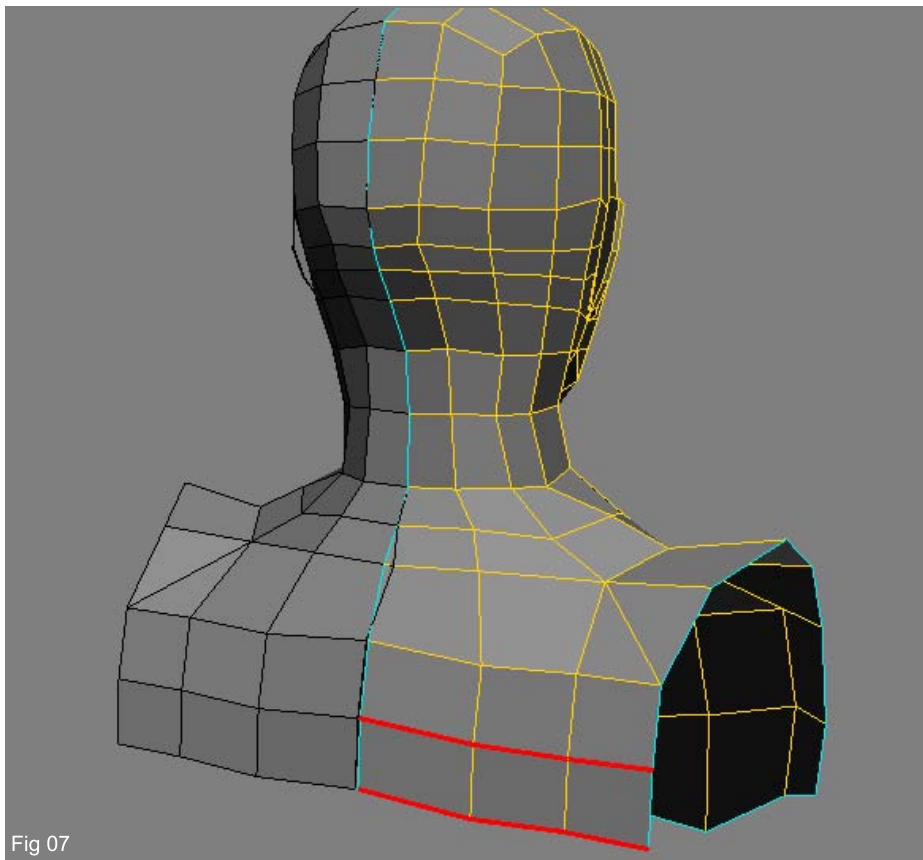


Fig 07

7. In the same way, we can extrude new polygons for the upper back (Fig07).

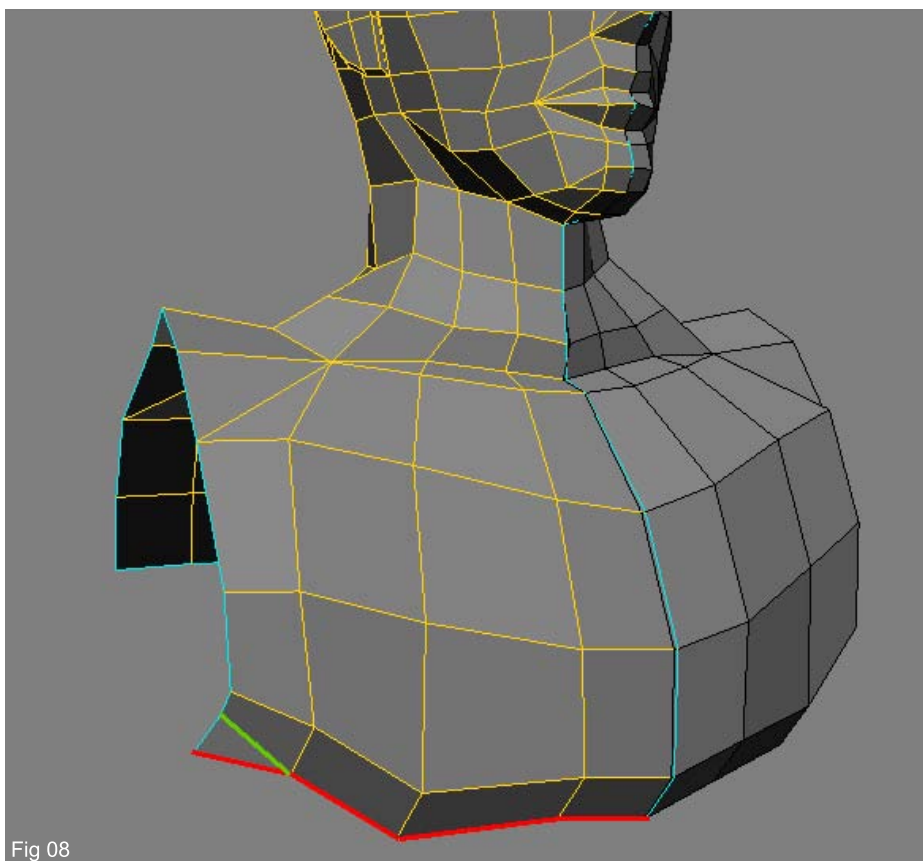


Fig 08

8. Let's go back to the front chest. Extrude a new loop of edges, but this time also pull it inwards like shown in Fig08. Finally add a new cut (show in green in Fig08).



9. Looking at Fig09 (side view of the model) you can notice the shape that the arm will have once it will be extruded from the shoulder. But before we can proceed with the arm, we need to create one more extrusion for the front and back part of the chest.

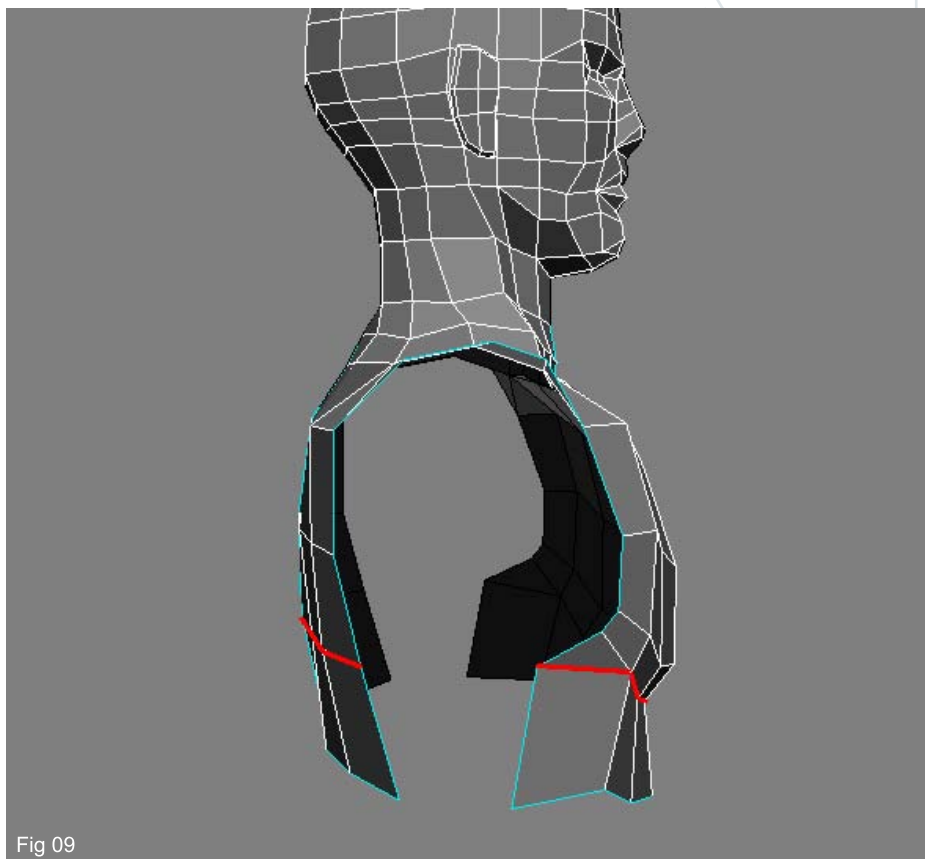


Fig 09

10. Use the 'N' shortcut key to create a new poly that closes the gap between the front and back of the chest, as shown in Fig10. Also, add a new cut (marked in red in Fig10).

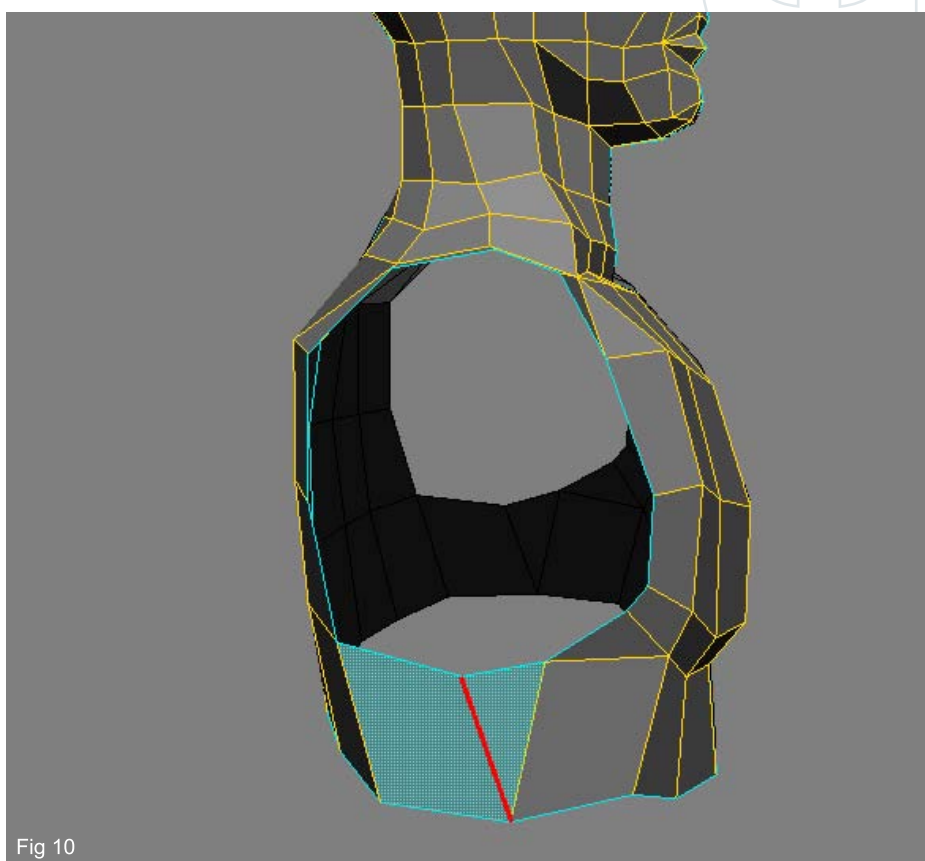


Fig 10



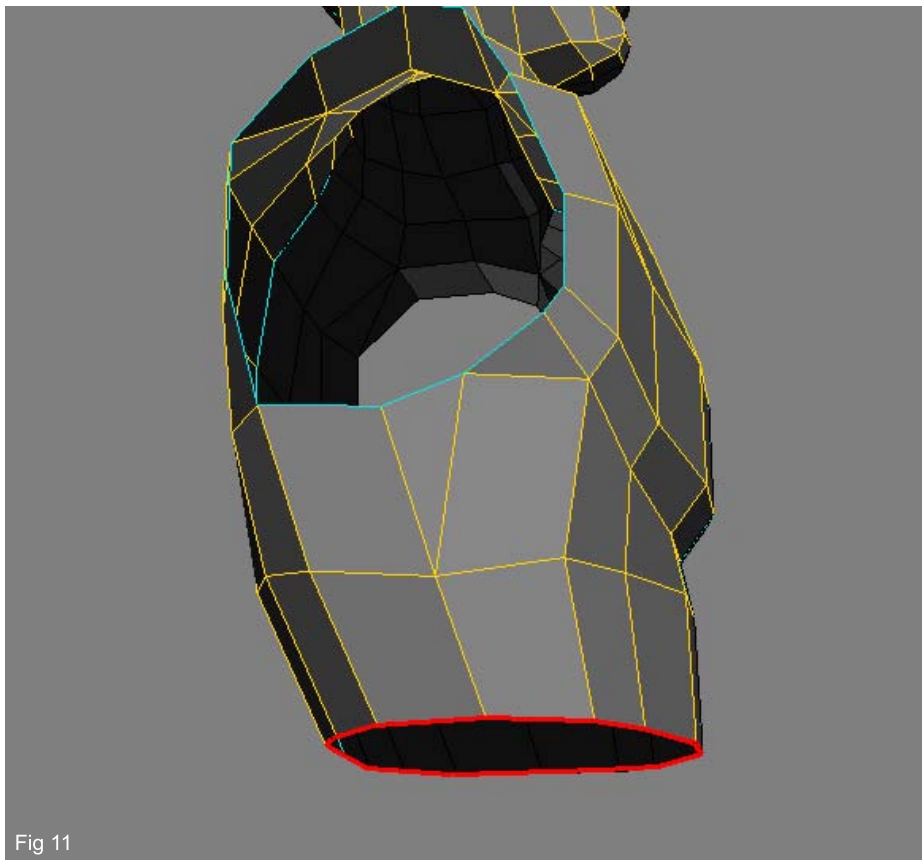


Fig 11

11. Now we have a complete loop of edges all around the lower part of the mesh. Select it and extrude it to continue building the torso (Fig11).

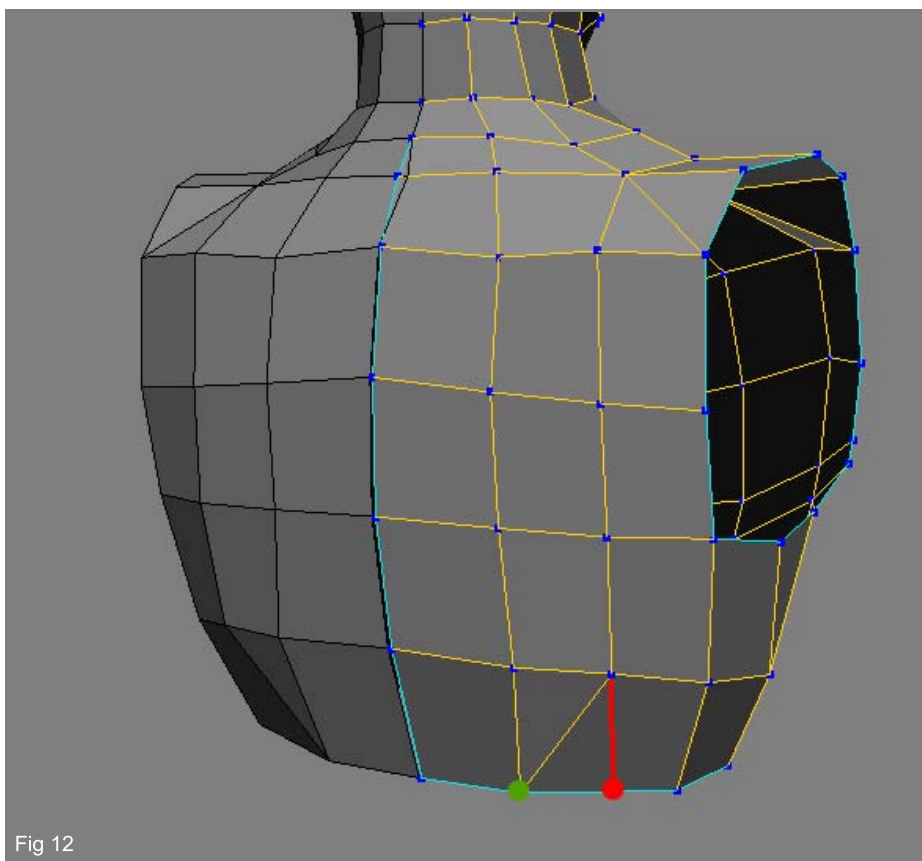


Fig 12

12. Let's go to the back area. To make the mesh follow the muscle topology better, we can weld the red-marked vertex (in Fig12) to the green-marked one. This will create a triangle that suits better to the muscles.



13. Select the bottom loop of edges and extrude it once again. This time, make a nice, long extrusion (Fig13).

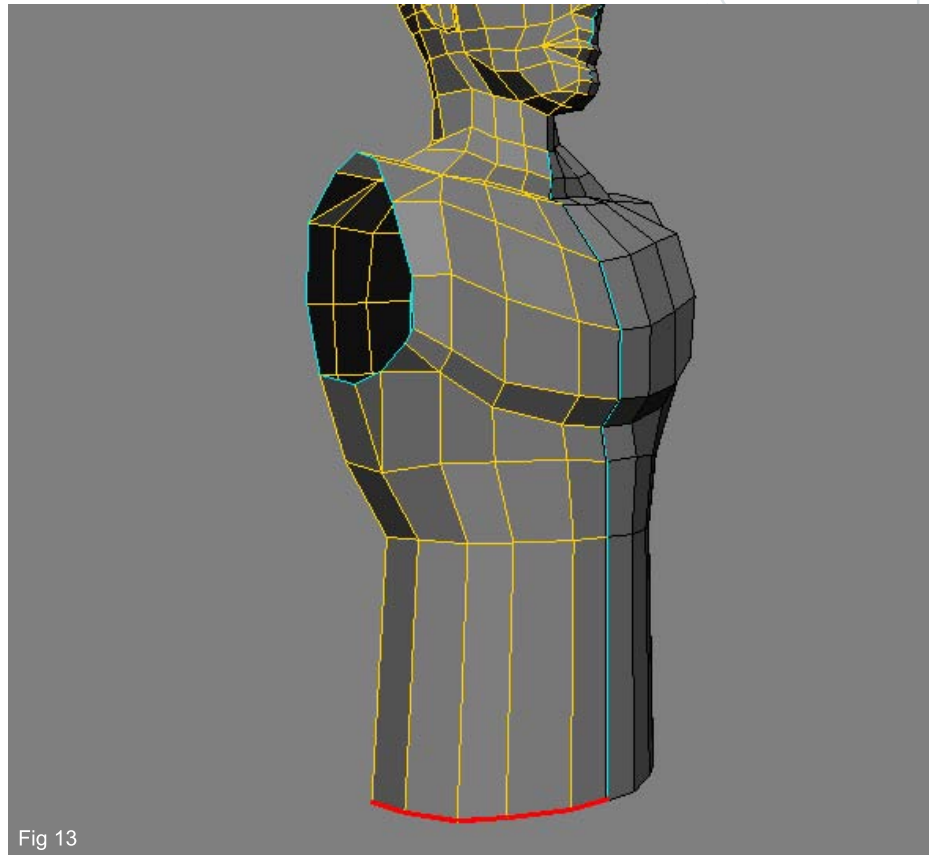


Fig 13

14. Select the edge ring you just created with the extrusion, and subdivide it (Shft + D) by a value of 4, like shown in Fig14.

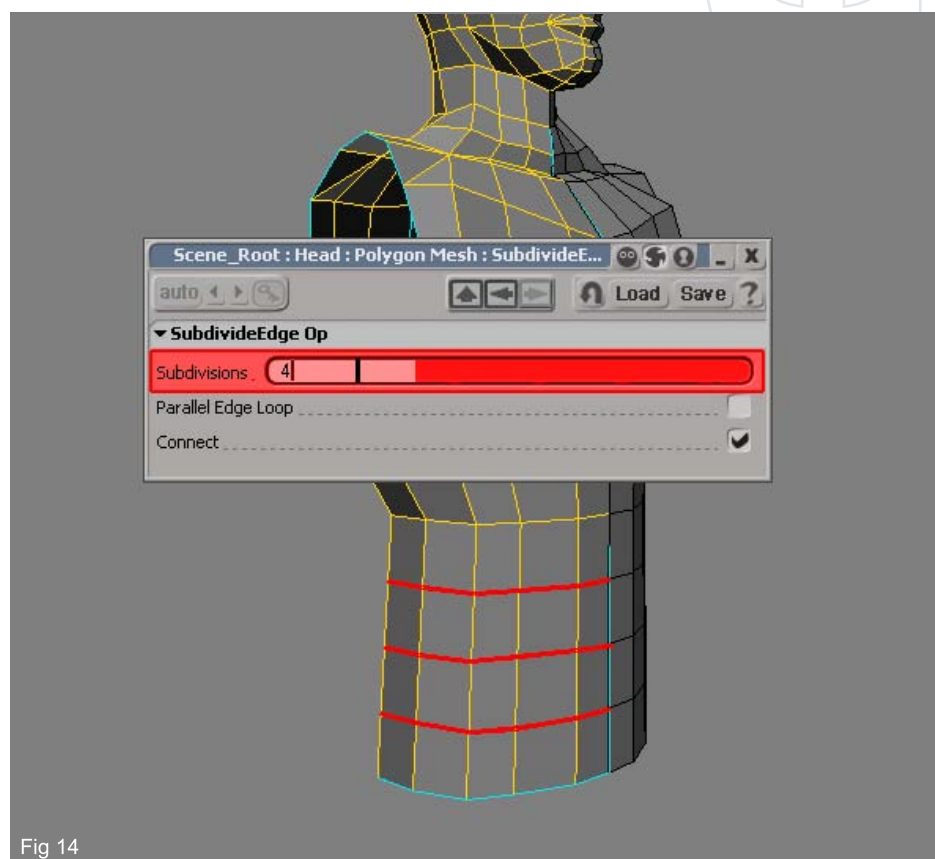


Fig 14



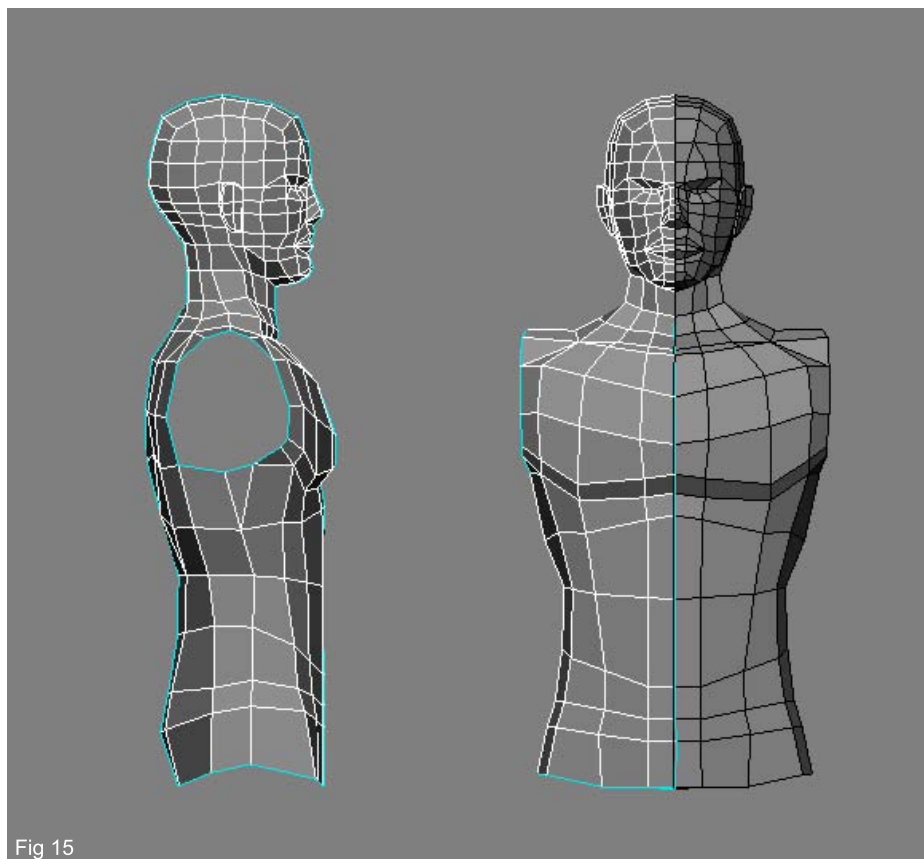


Fig 15

15. Now it's time to give all these vertices some order. Use Fig15 as a reference to reshape the vertices. Work in front view first, then in side view, and always keep an eye on the Camera view to see how the model looks in 3-dimensions.

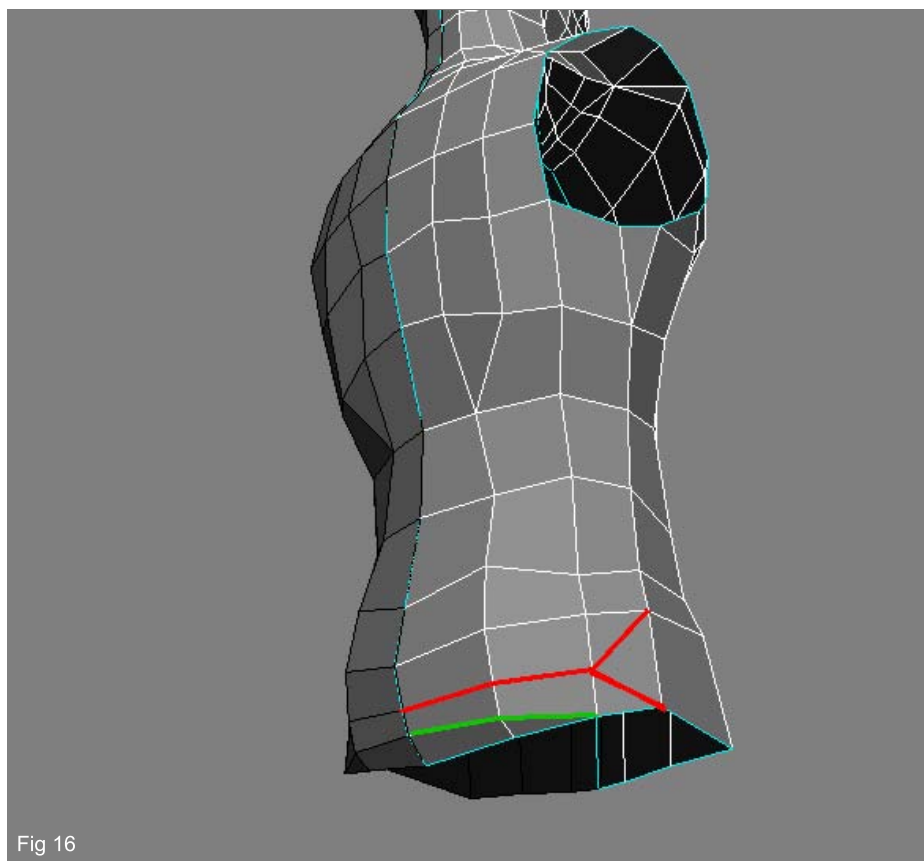
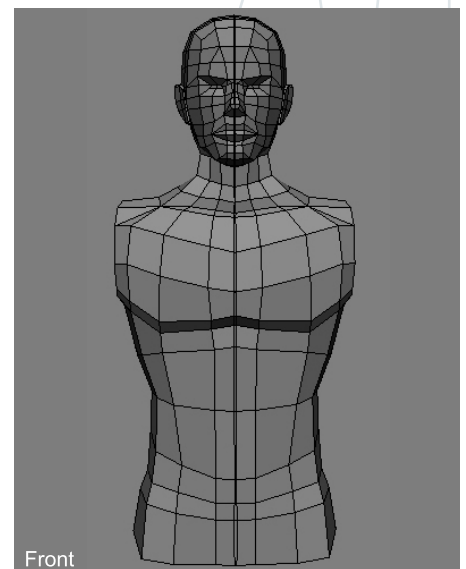
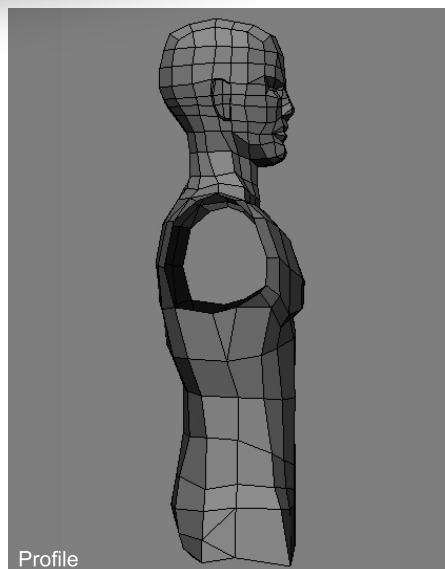
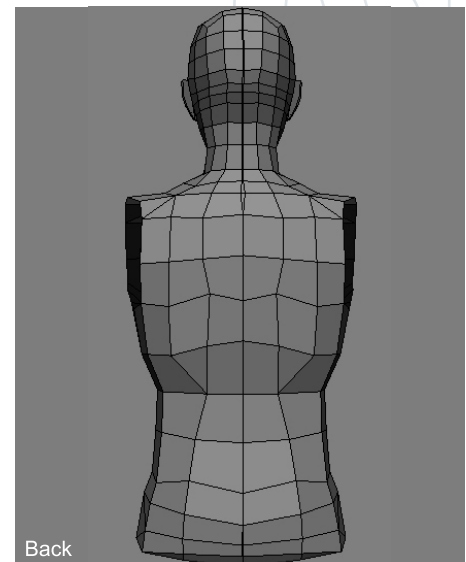
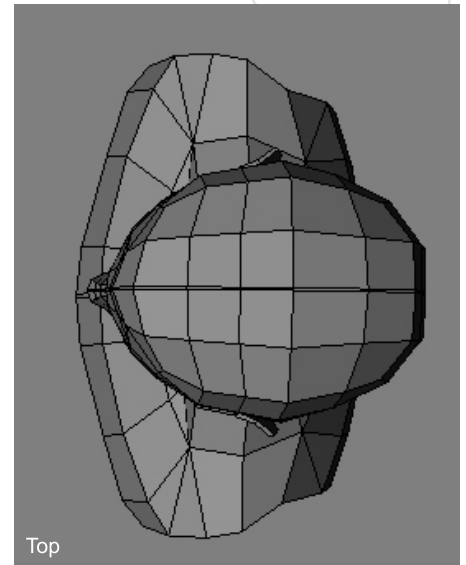
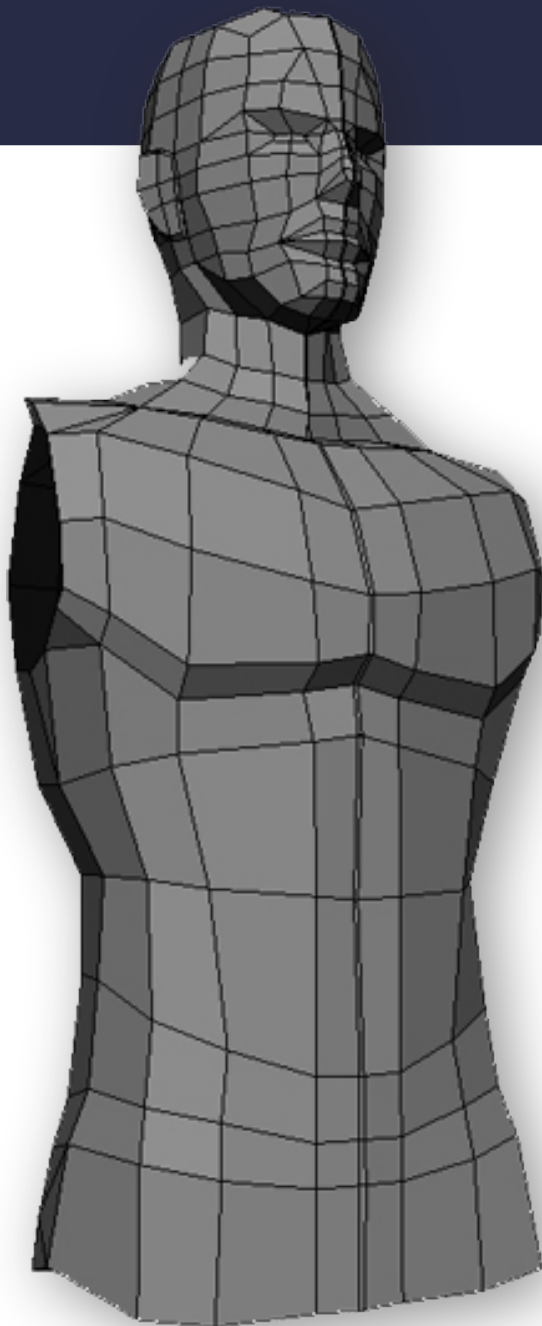


Fig 16

16. We're almost done. We just need to add two more cuts that will create better shapes later on when animating and deforming the mesh. Add the first cut (marked in red in Fig16), and then the last one (marked in green in Fig16).





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